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Assessing the Impact of VReps' VR Training on NBA Rookies' Performance and Playing Time

"Using VReps has helped me a lot heading into my rookie season. Being able to live through game scenarios and see what NBA spacing looks like has made me more prepared and ready for my first season in the NBA"

Chet Holmgren
Oklahoma City Thunder

Executive Summary

VReps employed Virtual Reality (VR) technology to train NBA rookies Jalen Williams, Christian Braun, and Jabari Walker before their debut season in the league. Chet Holmgren (quoted above) trained extensively in VR as well, but missed his rookie season due to a foot injury. This case study aims to assess the effectiveness of the VR training by evaluating key performance metrics, specifically Estimated Plus/Minus (EPM) and playing time, and comparing them to their respective draft-range peers over the past decade. The results suggest a promising outlook on the value of VReps' technology in improving a player's "feel for the game."

Introduction

Background

Virtual Reality (VR) technology has seen an upswing in various sectors, including sports training. VReps has ventured into this arena with the primary focus on "decision training," aiming to improve a player's "feel for the game." But how do we quantify something as intangible as a player's "feel" for the game?

Why EPM?

Estimated Plus/Minus (EPM) serves as a crucial metric in this context. EPM gives us a comprehensive view of a player's performance, capturing not just scoring but also the player's overall contribution to the team. Developed by Taylor Snarr, a former analyst for the Utah Jazz, EPM is based on net scoring margins a player contributes per 100 possessions. It has been shown to be an effective "one-number" model to evaluate player value. When it comes to evaluating the effectiveness of "decision training," the breadth of the EPM metric allows us to see if the player is making smarter decisions that positively affect all aspects of the game, not just scoring.

The Importance of Playing Time

While EPM provides valuable insight into a player's on-court performance, playing time serves as another significant indicator, albeit indirectly. The amount of time a young player spends on the court can often be seen as a proxy for the level of trust a coaching staff has in that player's decision-making abilities. Rookies who find themselves in the rotation more frequently are typically those who have demonstrated a capacity to make sound decisions on the court, execute game plans, and adapt to the speed and complexity of NBA games. Essentially, higher playing time suggests that the coaching staff trusts the player's "feel for the game," making this metric an ideal gauge for our VR training's effectiveness.

Using both EPM and playing time allows for a rounded understanding of a rookie's performance and adaptability, and whether our VR training enhances these aspects to give them an edge over their peers.

Objective

The primary objective of this case study is to determine the effectiveness of VReps' VR training by analyzing the performance and playing time of the players who underwent the training compared to NBA rookies from previous years.

Methodology

Data Collection

Data was collected from drafts between 2013 and 2022. Only the rookie year performance and playing time data were considered, excluding players who did not immediately enter the NBA after being drafted.
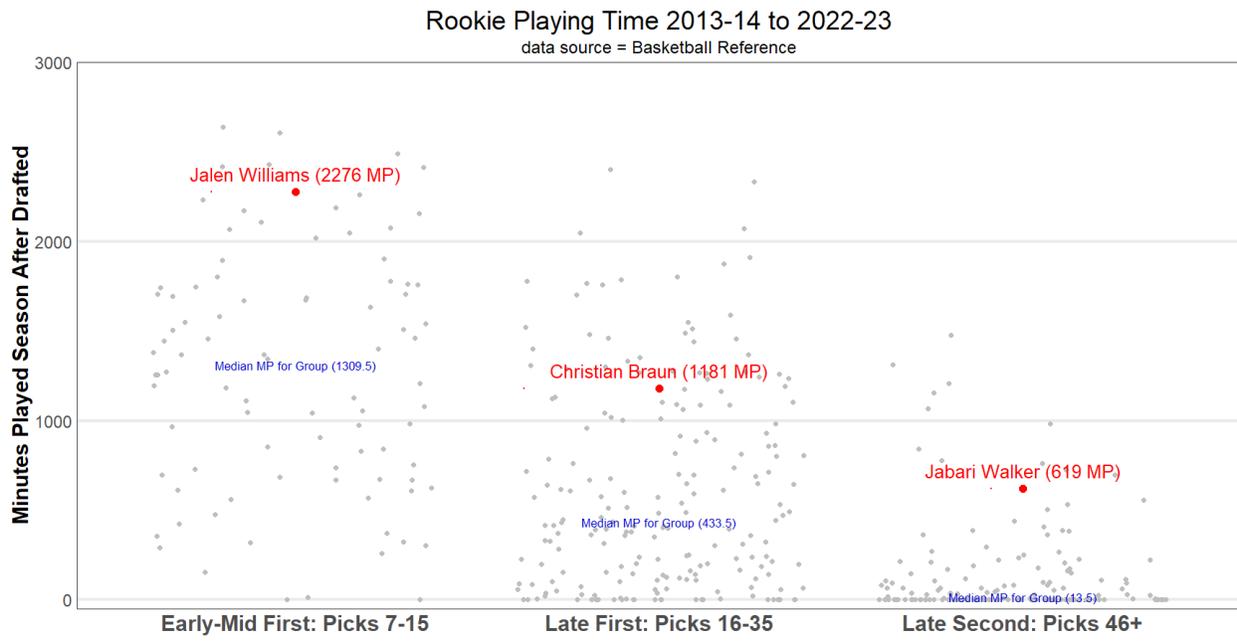
Comparison Groups

1. Jalen Williams: Early mid first-round picks ranging from 7-15.
2. Christian Braun: Late first-round picks ranging from 16-35.
3. Jabari Walker: Late second-round picks ranging from 46-60.

Performance Metrics

1. **Estimated Plus/Minus (EPM)**: This metric is available at dunksandthrees.com and serves as a measure of a player's contribution to net scoring margin per 100 possessions. Importantly, only players who appeared in at least 500 minutes in the season following their draft year were included in EPM measures and calculations.
2. **Playing Time**: The amount of time spent on the court by a player.
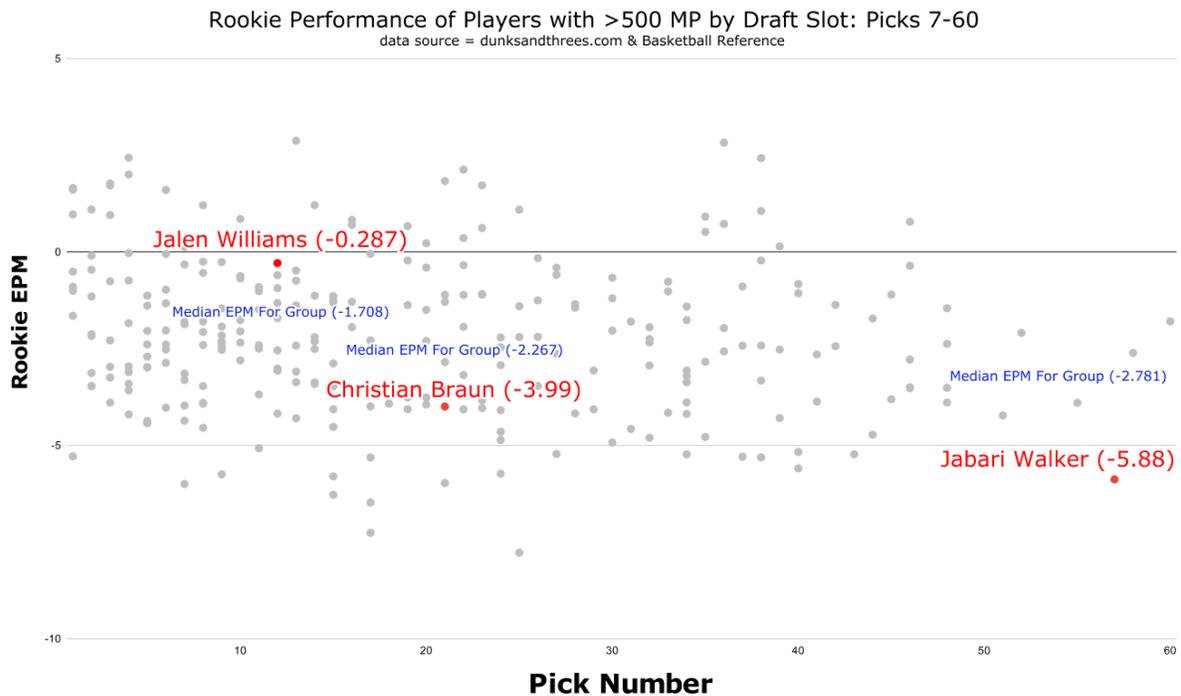
Results

Playing Time

Rookie Playing Time 2013-14 to 2022-23
data source = Basketball Reference

Jalen Williams: Ranked 9th among all draft-year rookies in the last decade.

Christian Braun: Ranked 39th among comparison group in the last decade. Notably averaged 10+ minutes per game in 19 postseason appearances. One of only 17 rookies in the last decade to average 10+ minutes in 7+ postseason games.

Jabari Walker: Ranked 12th among comparison group in the last decade. Only 15 of the 148 of the players in this group have logged at least 500 minutes in their rookie season, Jabari recorded over 600, well above average.

Estimated Plus/Minus (EPM)

Rookie Performance of Players with >500 MP by Draft Slot: Picks 7-60
data source = dunksandthrees.com & Basketball Reference

Jalen Williams: Although slightly negative in EPM, he performed well above the average for rookies taken in the Top 15.

Christian Braun: His EPM should be considered in the context of the top half of his draft-range cohort, as he was among the 92 of 200 players in the 16-35 range to play at least 500 minutes.

Jabari Walker: As only 15 of the 148 players picked in his range played at least 500 minutes, his EPM should be considered against the top 10% of his draft-range cohort.
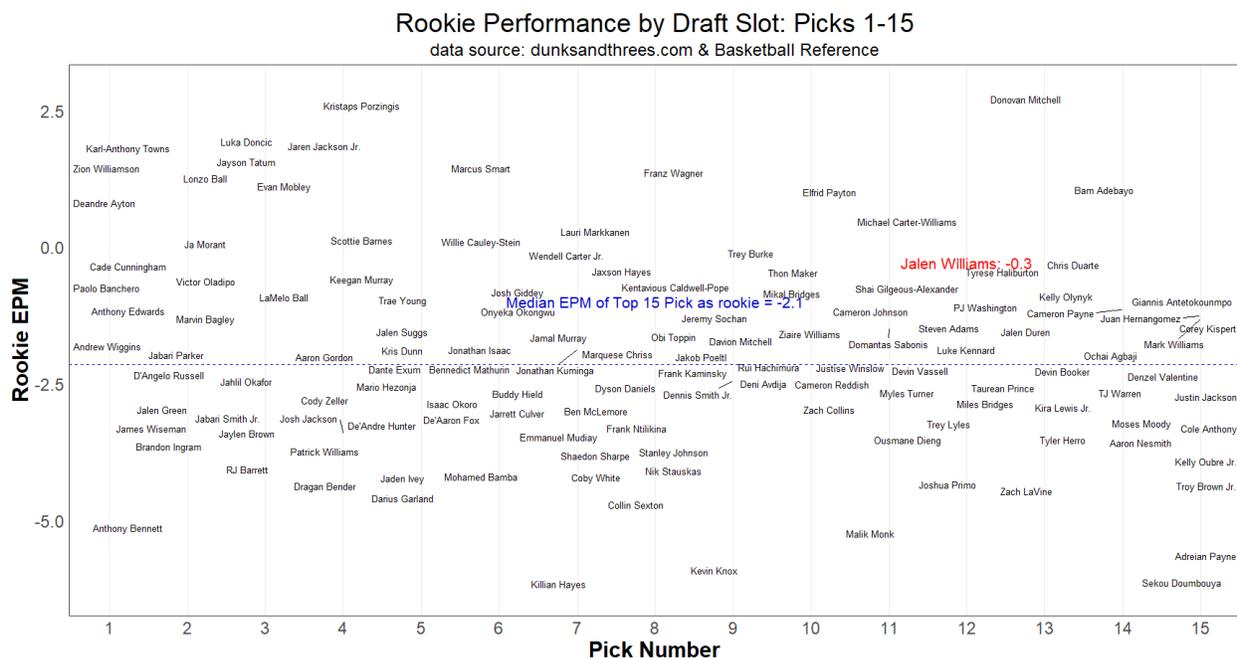
Discussion

Key Findings

High Playing Time: All three players who underwent VReps' VR training were well above average for their draft position.

Postseason Performance: Braun's postseason performance was particularly noteworthy, significantly outperforming playoff averages for rookies.

Above Average EPM: Jalen Williams' EPM was above the average for rookies in the Top 15, suggesting that he made significant contributions on the floor.

Rookie Performance by Draft Slot: Picks 1-15
data source: dunksandthrees.com & Basketball Reference

Implications

These findings suggest that VReps' VR technology can potentially improve a rookie player's feel for the game at the NBA level, making them more likely to earn trust and playing time from their coaches.

Conclusion

The initial results of employing VReps' VR training technology in the development of NBA rookies are promising. Although more data is needed for a comprehensive understanding, the increased playing time and above-average EPM scores for those who underwent the training point to its effectiveness.