

Retention and Roster Size: Finding the “Sweet Spot” for Football

Original research by Dr. Adam Cocco and Alan Grosbach

Updated by Laura Schneider

In 2025, an ROA Research Brief examined the relationship between roster and retention in the sport of football. That research concluded that there was a “sweet spot” for football roster sizes; researchers identified an “ideal” roster size, finding that football teams with smaller and larger roster sizes than that “ideal” roster size tended to have lower retention rates than those within the “ideal” roster size. The current research brief provides updated information, adding data from the 2024-2025 academic year to the original research.

Practical Considerations:

- ▼ How does your athletics department balance the trade-offs between football roster size, retention, and net return? What aspects of retention and net return do you prioritize when considering roster size of your football program?
- ▼ Are you an institution with a roster size below 120 or above 150 athletes and still produce an above average retention rate among your team? If so, what other factors do you feel contribute to this outcome?
- ▼ How can you utilize a JV football team to enhance retention within your football program?

Football is the NAIA’s largest roster sport. In the 2024-2025 academic year, 95 NAIA universities had football programs, averaging 126 student athletes on their teams. Due to these larger roster sizes, football tends to be a main driver in net return from athletics; for instance, NAIA institutions saw an average net return of \$1,732,094 from football alone in the 2024-2025 academic year. However, larger roster sizes can also present challenges. Football rosters ranged from a minimum of 32 student athletes to 256 student athletes in the 2024-2025 academic year – a wider variance than exists in any other NAIA sports program. Additionally, retaining student athletes becomes more challenging when roster sizes are larger. NAIA institutions retained an average of 57.9% of student athletes across football programs in the 2024-2025 academic year, falling slightly from an average retention rate of 60% the previous year.

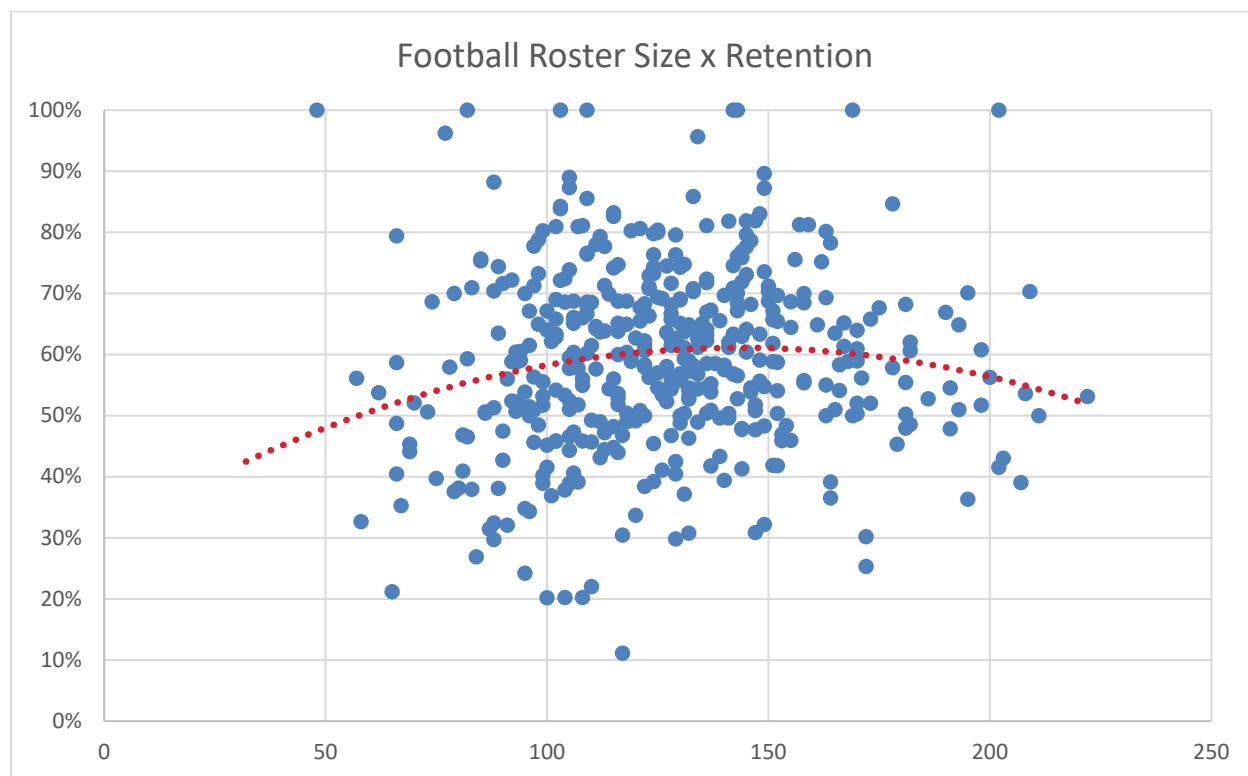
For this reason, the research team set out to find the “sweet spot”, where retention rates for football programs are at their highest. Data from football roster sizes and retention rates were



analyzed from the 2020-2021 to the 2024-2025 academic years. After removing outliers – observations where roster size or retention were more than three standard deviations above or below the average – 459 team seasons were included in the analysis.

The research team originally hypothesized that a relationship between retention rates and large roster sizes existed, predicting that both smaller and larger roster sizes led to decreased retention rates, while mid-ranged roster sizes produced higher retention rates. They found that football rosters containing between 120-150 student athletes had an average retention rate of approximately 61%, which was three to four percent higher than retention rates in football programs above or below that range. A similar observation was made when including data from the 2024-2025 academic year. NAIA institutions with a roster size of 120-149 student athletes retained 61.5% of those athletes on average. Meanwhile, NAIA institutions with larger roster sizes retained 2.7% fewer student athletes, and NAIA institutions with smaller roster sizes retained 3.9% fewer student athletes.

Football			
	Low	Ideal	High
Roster Size	32-119	120-149	150-222
Average Retention	59.59%	61.47%	58.74%
Average Net Return	\$1,141,628	\$1,777,516	\$2,659,143



However, there is a sizeable tradeoff. While NAIA institutions with roster sizes the “ideal” range (120-149 student athletes) retained more students on average, they saw \$881,627 less in net return on average than NAIA institutions with roster sizes in the “high” range (150-222 student athletes) – a 50% difference. However, NAIA institutions with roster sizes in the “high” range retained 2.7% fewer student athletes on average.

This speaks to the complexity of the relationship between roster size and retention. Smaller roster sizes may contribute to both decreased retention rates and a smaller net return. Larger roster sizes could bring about a higher net return, but could also contribute to a decreased retention rate. As such, there is no definitive “correct” answer. Roster size is a significant consideration, but there are NAIA institutions that have smaller or larger than “ideal” roster sizes and still boast retention rates that are above average. This may be attributable to things that make those NAIA institutions unique, such as culture, coaching, and/or core values.

Key Takeaways:

- ▼ Football is the largest roster sport among NAIA championship sport programs and has the largest variance in roster sizes, ranging between 32 and 256 student athletes between the 2020-2021 and the 2024-2025 academic years.
- ▼ There is a non-linear relationship between roster sizes and retention rates, with the “sweet spot” roster size being 120-149 student athletes.
- ▼ Football programs with a roster size between 120-149 student athletes retained 2.7-3.9% more than those with smaller or larger roster sizes.
- ▼ There is a tradeoff between larger roster sizes and net return. When compared to NAIA football programs within the “ideal” roster size range, NAIA institutions with larger football roster sizes (150-222 student athletes) had an average net return of \$2.66 million – 50% more than the average net return within the “ideal” range - but retained 2.7% fewer student athletes on average.

