We tried 3 different heuristics. Here own_moves refer to number of legal moves possible for student and opp_moves is number of legal moves for opposition in current game state.

No.	Heuristic Formula	ID_Improved success	Student success
1	own_moves - 2*opp_moves	73.57%	8.57%
2	2*own_moves - opp_moves	67.86%	77.14%
3	(2*own_moves - opp_moves)/ (len(game.get_blank_spaces)+1)	73.57%	82.86%

In 1st heuristic, we try to play aggressively by giving more weightage to number of opposition moves. Student's agent performance is dismally low with this aggression.

In 2nd heuristic, we give emphasis on number of moves available to player by giving it double weightage as compared to opposition. Here we see that student's agent is consistently better than ID_improved.

In 3rd and final heuristic, we divide the above by number of blank states. This gives great improvement as student's player is able to try out different states at starting of game when there are large number of blank spaces but at end of games when there are very few choices, it takes optimal decision.

Difference in performance of different agents is depicted below:-