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User's Actions on Multi-Player Games with
Autonomously Supporting Agents
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A standard Q-learning approach finds a policy what action agent will take in some environment. Even when a Q-learning process converges, it may not learn the whole policies especially the situations after taking non-optimal actions. In multi-player game environments, since sometimes agents join on behalf of other players, agents cannot always get optimal actions for the player's comfortable game play. Furthermore, agents can choose possible actions depending on the player's skills, and agents evaluate the users' actions to estimate the users' skill levels. To do this, agents will have well-learned Q-values for evaluating user's actions even after taking non-optimal actions. In this research, selective Q-learning has been applied to make Q-values usable even after the scenarios of taking non-optimal actions.