Weighting the Position & Skillset of Players in League of Legends Using Analytic Hierarchy Process

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Abstract - *Today, esports such as League of Legends are a popular form of competition using video games. Many researchers have conducted studies in the esports field such as player psychology, training, and physical exercise; however, those that apply quantitative techniques are still scarce. In this paper, Analytic Hierarchy Process is proposed for weighting position and skillsets of players in League of Legends. It is hypothesized by the developer that pairwise comparison can be used to derive priority scale through the judgment of experts. A questionnaire is designed to obtain pairwise comparison from players which are then used to develop the priority scale. The empirical results obtained show the weightage of position and skillset of each player. This weightage shows the priorities of certain position compared to other positions, and the priorities of skillsets needed to perform well in each position, based on their judgment. The results can be used to determine the most suitable players for each position with the right skillset quantitatively and systematically.*

Keywords: AHP, esports, League of Legends, team formation.

1 Introduction

League of Legends is a competitive multiplayer online battle arena (MOBA) game where a team of five fights against another team of five in order to destroy the opponent's base (called the Nexus) as the winning condition in a map called Summoner's Rift (Riot, 2020). Communicative ability and teamworking skill among teammates are important in achieving success (Costa, 2019). Deciding who plays in a team can determine whether the team wins or loses, therefore this study will use Analytic Hierarchy Process in weighting player roles and skillset to highlight the level of importance and significance of finding a suitable player for a certain position.