Game developers often face the issue of having well balanced game in terms of difficulty, especially in role-playing games. Skill tree is a game element which contributes to solve this issue by giving the player more power in-game. Many game elements can be procedurally generated to save time and money to developers, but can skill trees be procedurally generated too? And how do we validate, that generated skill trees are well suited for the game? That is the goal of this work. We have made a simple turn-based game. Then we made several variations of generators of skill trees for the game. We took the best trees and validated their performance using artificial players based on data collected during their gameplay. Then we compared the trees and concluded that skill trees can be generated by our suggested method and their variations.