Improving User Onboarding with Conditional Activities: An Application to Online Children Education

Abstract

We study the problem of consumer onboarding in the context of an online educational platform for children, where the completion of math lessons is rewarded with access to entertaining activities. To explain usage, we develop a multiple discrete-continuous time allocation model that accounts for the existence of a conditional activity, i.e., when the completion of one activity – a lesson – allows access to another activity – a game. The child’s usage decisions in turn influence their parent’s subscription decision. We estimate the model on data from two online field experiments involving more than 21,000 pairs of children and parents. In counterfactual simulations, we show that alternative customized platform design during user onboarding, such as increased time of core math content, can lead to increases in subscriptions without a significant decrease in usage.