Trustworthy Advice

"If you go to Ferran Adria's restaurant you will have the time of your life!" "If you study everyday for two hours you will get very good marks next semester." These are examples of advice. We say an advice has two components: a plan to perform and a goal to achieve. In dynamic logic, an advice could be formalised as: $[P_?G]$. That is, if ? performs plan $P$, then goal $G$ will necessarily be achieved. An adviser is an entity which provides such advice. An adviser may be an agent, a planner, or a complex recommender system. This paper proposes a novel trust model for assessing the trustworthiness of advice and advisers. It calculates the expectation of an advice's outcome by assessing the probabilities of the advised plan being picked up and performed, and the goal being achieved. These probabilities are learned from an analysis of similar past experiences using tools such as semantic matching and action empowerment.