## GEQ1000 Asking Questions Economics (Social Science) Segment Video 1.6 Summary of Program Evaluation

Let me provide a quick recap of what we have learned about program evaluation and causal inference. The first thing we've learned is that to think about cause and effect in the social sciences is to think about counterfactuals that cannot be observed. To evaluate a policy that has been implemented, we *must* ask "what would have happened if the policy was not implemented?" And we recognize that this is a very hard question to answer!

The second thing we've learned is that program evaluation is essentially the use of identification assumptions to solve the fundamental problem of causal inference. The identification assumptions allow us to argue that we can use an observation to take the place of the counterfactual. Thus, we must ask of any study "What is the identification assumption?"

The third thing we've learned is that the randomized trial is the closest thing to a controlled experiment that is available for social science research. It has the strongest internal validity, because its identification assumption is the most believable. Thus, we can ask of studies using other designs "How close of an approximation is this design to a randomized trial?". Another way of asking the same question is "How confident are we in the identification assumptions of the method?"

The fourth thing that we've learned is that there are trade-offs to consider when choosing between using randomized trials or observation methods. Randomized trials have the best internal validity, but they also have high costs, and create ethical difficulties. Observational methods are more feasible, avoid ethical problems, but have weaker internal validity.

Every method has its costs as well as its benefits. Economists often emphasize that making choices involves making trade-offs. There is no perfect method. We choose amongst imperfect methods, and must decide on the trade-offs we are willing to live with.