Broadly speaking, 'methodology' is ways of looking for an answer to a research question so as to arrive at a conclusion. Justification is convincing the research community that the answer/conclusion should be accepted. In my talk, I will present a framework for understanding the methodological and justificationary core and differences across academic domains, with elaboration of the following points:

In evidence-gathering methodologies that investigate causal or correlational hypotheses (e.g., experiments, surveys, structured interviews), justification involves adherence to standard methodological protocols. In other evidence-gathering methodologies (e.g., textual analysis, ethnography) and in contemplative methodologies that investigate theories and interpretations (in mathematics, the natural the social sciences, and the humanities), justification calls for an extended chain of reasoning called argument.

Arguments in mathematics (called proofs) employ non-defeasible reasoning; those in theoretical science and in theories/interpretations in the humanities employ defeasible reasoning.