$$\begin{aligned} x_{ij} \sim \text{Normal}(T_i, \sigma_E^2) \\ & \downarrow & \downarrow \\ & \to \sigma_E^2 \sim \text{InvGamma}(\nu_E/2, \nu_E \sigma_E^2/2) \\ & T_i \sim \text{Normal}(\mu_T, \sigma_T^2) \\ & \downarrow & \downarrow \\ & \downarrow & \sigma_T^2 \sim \text{InvGamma}(\nu_T/2, \nu_T \sigma_T^2/2) \\ & \mu_T \sim \text{Normal}(\mu_{\mu_T}, \sigma_{\mu_T}^2) \end{aligned}$$