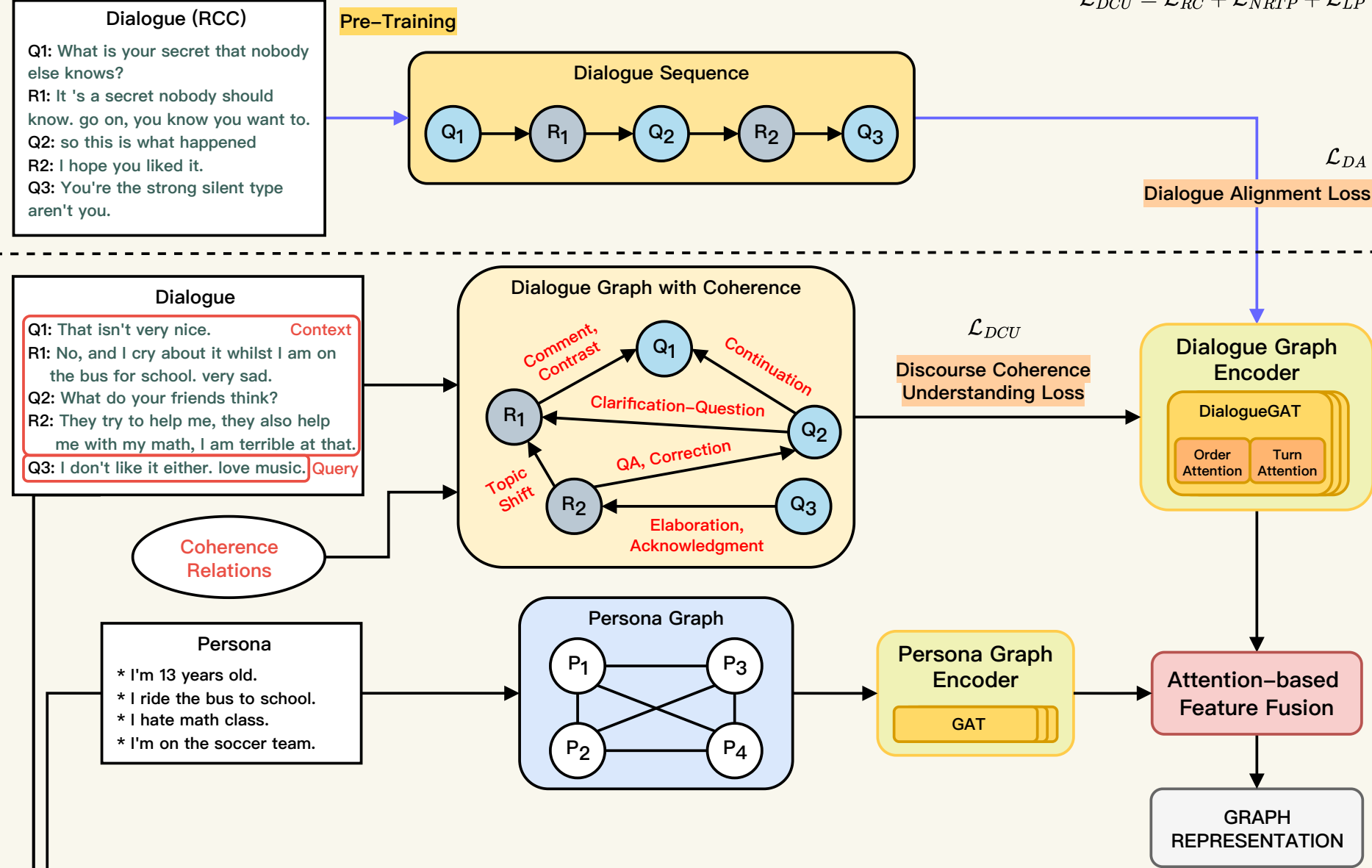
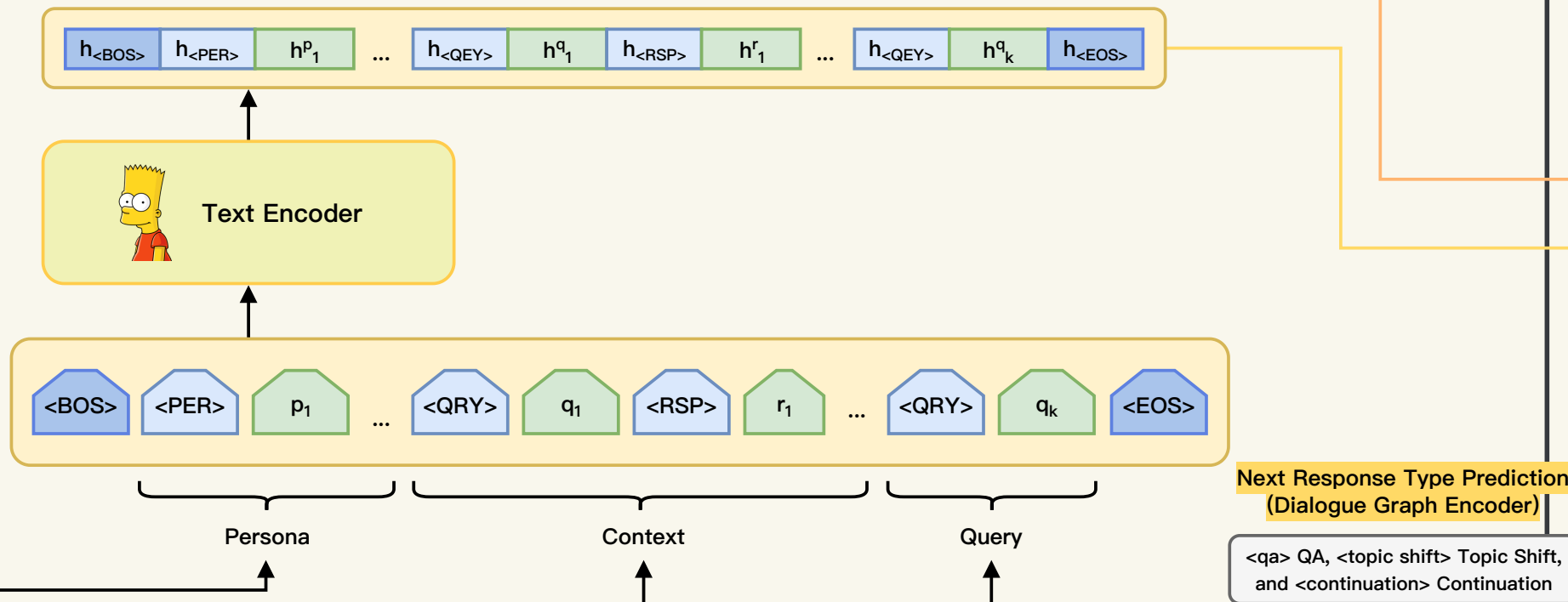


### (1) Discourse Coherence Learning



### (2) Persona-consistency Learning



### (3) Personalized Response Generation

