Contextual Probabilistic Latent Semantic Analysis (CPLSA) [Mei & Zhai 06]

- General idea:
  - Explicitly add interesting context variables into a generative model (➜ enable discovery contextualized topics)
  - Context influences both coverage and content variation of topics
- As an extension of PLSA
  - Model the conditional likelihood of text given context
  - Assume context-dependent views of a topic
  - Assume context-dependent topic coverage
  - EM algorithm can still be used for parameter estimation
  - Estimated parameters naturally contain context variables, enabling contextual text mining