Cohesion, Entrainment and Task Success in Educational Dialog

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Researchers often study dialog corpora to better understand what makes some dialogs more successful than others. In this talk I will examine the relationship between coherence/entrainment and task success, in several types of educational dialog corpora: 1) one-on-one tutoring, where students use dialog to interact with a human tutor in the physics domain, 2) one-on-one tutoring, where students instead interact with a spoken dialog system, and 3) engineering design, where student teams engage in multi-party dialog to complete a group project. I will first introduce several corpus-based measures of both lexical and acoustic-prosodic dialog cohesion and entrainment, and extend them to handle multi-party conversations. I will then show that the amount of cohesion and/or entrainment positively correlates with measures of educational task success in all of our corpora. Finally, I will discuss how we are using our findings to build better tutorial dialog systems.