Project Title:	Text Understanding Through Revealed Discourse Structure
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Abstract:

Writer especially younger student, even native speaker, always having problem when composing a good essay, not just because lack of idea or typography problems but is also mainly due to the problem in building a coherence text. An essay is a type of discourse, which is a sequence of related sentences. Research in NLP shows that an attempt to build a discourse structure engine and its application in building a writer aids or an essay grading system are a very difficult task because it involves a dynamic Linguistic issues such as pronominal, anaphoric resolution, ambiguity and referential problems. Writing skill among students also shows the lack used of cue words such as 'moreover' and 'in addition', which usually marked the discourse relation. The research investigates and improve available algorithm that able to reveal discourse structure of student's essay even if there's no cue words and has minor grammatical errors. It provides ruleset, which uses a number of linguistic parameters such as referential relation, lexical relation and theme and rheme and suggests a daughter or a sister relations between two sentences (not necessary in adjacent of unrestricted text. A prototype of a discourse structure builder engine, called an Essay Structure Revealer is implemented and tested with a number of essays (prepared by the English and Malay native students) and was experimented by a school teacher. The results are satisfactory as the essays must be pre-annotated by the human, however, it can be used as a reflective teaching aids or a writing support tool to understand the cohesion of the student essays. Usually, well composed essay will have smooth tree structure while poor composed essay revealed a complicated structure.