

## **Scaffolding Academic Discourse in the Reading to Learn Program**

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The Reading to Learn program developed by Rose (2005a, b) is a Sydney School approach to genre pedagogy, grounded on the theoretical model of language developed by Michael Halliday (1994). The distinctive features of this model are its focus on grammar as a meaning making resource and its focus on text as semantic choice in social context. In terms of pedagogical orientations, the innovative approach is characterized by its adoption of an explicit mode of transmission and its ideologically motivated advocacy to empower the disadvantaged groups in Australia. For this reason, Martin (1998, 2006) positions the Reading to Learn pedagogy in the lower right-hand quadrant of Bernstein's topological diagram of instructional theories (Bernstein 1975, 1990, 1996), regarding it as explicit and subversive.

The scaffolding learning cycle is considered the foundation of the Reading to Learn pedagogy. It consists of the three learning steps of Prepare, Task and Elaborate. In academic contexts, elaboration takes the form of defining technical or literate wordings, explaining new concepts or metaphors or discussing students' relevant experience. It aims to enable students to access academic discourse and improve learning performance.

Through an analysis of demonstration lessons in the Reading to Learn program, the presentation explores relations between elaboration and academic discourse. What features of academic discourse are elaborated? How are they elaborated? How does meaning shift from an academic text to teacher's elaboration on it? First patterns of lexical relations are identified and analyzed in terms of commitment. As academic discourse is characterized by abundant use of grammatical metaphor and technical terms, those two attributes are then examined. The framework of analysis is based on Bernstein's theory of knowledge structure and Maton's theory of semantic gravity and semantic density.

Bernstein (2000) proposes a theory of knowledge structure, distinguishing between horizontal and vertical discourses. Horizontal discourse refers to common sense knowledge requiring 'a set of strategies which are local, segmentally organized, context-specific and dependent' (2000: 160). It is functionally related to the everyday life with its meaning depending on the social context. Whereas, vertical discourse 'takes the form of a coherent, explicit and systematically principled structure' (159). Further, it consists of hierarchical knowledge structures as illustrated in the natural sciences and horizontal knowledge structures as in the disciplines of humanities and social sciences. Following Bernstein's model, Maton (2008, 2009) proposes the use of semantic gravity to analyze relations between knowledge and its social and cultural contexts and semantic density to examine relations between knowledge and its symbolic meaning. Semantic gravity is

determined by the extent to which meaning depends on the context of its use. A higher degree of dependence will make semantic gravity relatively stronger. In this vein, vertical discourse exhibits weaker semantic gravity than horizontal discourse. Semantic density describes the degree of meaning condensation within symbols. The meaning of symbol is more condensed when semantic density is stronger (SD+), less condensed when it is weaker (SD-). The two variables are independent of each other. SD may be stronger while SD is weaker. Maton mentions the processes of either weakening or strengthening semantic gravity and semantic density. For example, it is possible to strengthen semantic gravity by concretizing and contextualizing abstract or generalised ideas and weaken semantic density by substantiating an abstract idea with relevant details. Maton argues that weaker semantic gravity and stronger semantic density constitute the basis of strong L1/verticality while stronger semantic gravity and weaker semantic density form the basis of L2/grammaticality.

In the Reading to Learn pedagogy, teacher's elaboration of academic texts belongs largely to everyday practical discourse for the purpose of scaffolding students' reading comprehension. Because of its choice of stronger semantic gravity and weaker semantic density, it is 'oral, local, context dependent and specific, tacit, multi-layered and contradictory across but not within contexts (Bernstein 2000:157). However, its relations with academic texts interact in complex ways. In elaboration of lexical and phrasal meanings, we identify patterns of generalization which include de/classification, de/composition and exemplification. Elaboration of de/classification tends to be more general and less committed while that of de/composition and exemplification may be more specified and committed.

When grammatical metaphors are unpacked, there are apparent shifts in semantic gravity. In unpacking experiential metaphors, congruence takes the place of incongruence, thus strengthening semantic gravity. The process of restoration is localized and context-dependent. Meanwhile, the shifts of meaning are double-barreled. In the case of nominalized grammatical metaphor, the unpacking misses certain connotations implied but reveals the people and the thing meant to be elided. Furthermore, attitudinal meanings may be instantiated. When it comes to logical metaphor, the use of explicit conjunction makes explicit the internal conjunctive relations though it may affect the grading of probability. To facilitate students' understanding of explanations and arguments in academic texts, elaboration may begin with a meta-explanation summarizing the inherent links among the sentences.

Elaboration of technical terms is accompanied by shifts in semantic density. Technical terms are discipline-specific. Abstract technical terms often originate from grammatical metaphors. Martin (2007) convincingly argues that grammatical metaphor loses itself in definitions and change into the technical term, thus achieving 'the distilling impact of technicality'. Such technicality is significantly weakened in

elaboration. In social sciences and humanities, technical terms are often ideologically charged, invoking different attitudinal reactions among readers with different political inclinations. Naturally when a teacher elaborates a technical term, he/she usually infuses his/her attitudes into the elaboration which may not necessarily be the author's point of view. This is especially the case in the humanities. For instance, when a technical term refers to a historical event or a historical government policy, its explanation mostly ends with the teacher's own ideological evaluation.

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