

**Boldi et al. (2009)**

Used cognitive aspects of searchers issuing the query:

**Generalization:** user wants broader information than was obtained from the current search

**Specialization:** user narrows down the current search

**Mission Change:** user changes the search topic to an entirely different one

**Parallel Move:** user modifies the current query to change the search aspect with the same context Learners are the also knowledge producers, and discerning knowledge discoverers / navigators

**Error Correction:** user’s search intent does not change in the period before and after reformulation; examples are correcting a misspelled term and/or performing a query paraphrase

**Liu et al. (2010)**

Used linguistic properties of two successive queries:

**Generalization:** successive queries contain at least one term in common; second query contains fewer terms than first query

**Specialization:** successive queries contain at least one term in common; second query contains more terms than first query

**Word Substitution:** successive queries contain at least one term in common; second query has same length as first query, but contains some terms that are not in first query

**Repeat:** successive queries contain exactly the same terms, but the format or ordering of these terms may be different

**New:** successive queries do not contain any common terms

*Generalization* and *Specialization* are identical in both taxonomies. *Parallel Move* can contain *Word Substitution*, *Repeat*, or *New* QRTs. *Mission Change* will generally have *New* QRTs. *Error Correction* will possibly have *Repeat* or *Word Substitution*.