

Instructional practices in secondary science: How teachers achieve local and standards-based success

PROBLEM & METHOD

In six case studies in a research-practice partnership (RPP), we explored how teachers' instructional practices supported two types of success.

Local success involved satisfying students, parents, and administrators through effective classroom management, engagement with content, and fair assessment and grading.

Standards-based success was measured as pre-post change on three-dimensional science assessments. Unique to this study was a correlational analysis relating specific instructional practices with students' three-dimensional learning.

All case teachers achieved local success; only some achieved standards-based success (supporting three-dimensional learning).

LOCAL AND STANDARDS-BASED SUCCESS

Teachers who achieved local AND standards-based success facilitated **sensemaking** and **cognitive apprenticeship** with strategic sequencing of **divergent and convergent classroom discourse**.

Teachers who achieved only local success (less learning) led **activity-based teaching**—relying on pace and novelty for motivation, leading activities that covered the curriculum, and basing grading on participation and completion.

LOCAL SUCCESS

IMPLICATIONS

This study provided insights for design of professional learning in RPPs to help teachers build facility with practices that support both forms of success.