

RESEARCH AREA & SOURCE	DESCRIPTION & MAIN FINDINGS / ARGUMENTS										
<p>Instructional Strategies – Writing</p> <p><i>Learning and Instruction</i> Vol. 19 pp. 309 - 321</p>	<p>Kirkpatrick, L. & Klein, P. (2009) Planning text structure as a way to improve students’ writing from sources in the compare-contrast genre.</p> <p>The researchers devised a planning template to support student writing of compare and contrast texts. The template was trialed with 7th and 8th grade students. One group in their study was taught how to use the template (and required to memorize it). A control group continued with their normal writing lessons.</p> <p><u>Design of the template</u></p> <p>There is no single accepted structure for compare and contrast texts. However, in an analysis of university students’ writing, Spivey (1991) found that when comparing and contrasting, students used one of four text structures:</p> <ul style="list-style-type: none"> (a) information about each object was presented separately (b) objects were compared aspect by aspect (c) comparisons of aspects were grouped into two sections, one on similarities and one on differences (d) aspect-based comparisons were grouped into sections based on macro-aspects (eg. colour, shape, size etc. could be grouped together under the macro-aspect of physical attributes) <p>In holistic ratings of quality, Spivey found that texts using structure (d), those organized around macro aspects, consistently received higher scores than other types of structure. The template used in the Kirkpatrick and Klein study was designed specifically to help students sort information into categories based on aspects and macro-aspects for comparison.</p> <table border="1" data-bbox="321 982 1451 1187"> <thead> <tr> <th data-bbox="321 982 548 1078">Number</th> <th data-bbox="548 982 774 1078">Paragraph</th> <th data-bbox="774 982 1001 1078">Aspect</th> <th data-bbox="1001 982 1228 1078">Information (Topic 2)</th> <th data-bbox="1228 982 1451 1078">Information (Topic 1)</th> </tr> </thead> <tbody> <tr> <td data-bbox="321 1078 548 1187"></td> <td data-bbox="548 1078 774 1187"></td> <td data-bbox="774 1078 1001 1187"></td> <td data-bbox="1001 1078 1228 1187"></td> <td data-bbox="1228 1078 1451 1187"></td> </tr> </tbody> </table> <p>Students work from right to left as they fill in the template. The <i>information</i> columns are to help students select corresponding information about the two topics and juxtapose it. The purpose of the <i>aspect</i> column is to help students connect related information and organize it under aspects. The <i>paragraph</i> column allows students to further group the aspects into macro-aspects to be dealt with in a single paragraph. The <i>number</i> column helps students decide on the connections between paragraphs and therefore their logical order so that the text overall becomes cohesive.</p> <p>Findings:</p> <ul style="list-style-type: none"> ❖ For the experimental group, there was very little correlation on the pre-test between the structure of the writing plans and the structure 	Number	Paragraph	Aspect	Information (Topic 2)	Information (Topic 1)					
Number	Paragraph	Aspect	Information (Topic 2)	Information (Topic 1)							

	<p>of the texts students wrote based on these plans. At post-test, the correlation had increased substantially.</p> <ul style="list-style-type: none"> ❖ A text structure emerged from the study that had not been observed by Spivey, namely where students structured their text in three sections <ul style="list-style-type: none"> I. Aspect by aspect comparisons of similarities only II. Differences related object 1 III. Differences related to object 2 <p>(This structure was not used by any of the students in the experimental group on the post-test.)</p> <p>The researchers hypothesize that students of this age, or at this level of experience may not always be able to think about the global structure of the text and may even consider global structure while writing part of the text and only consider local structure in other parts.</p> ❖ Students who were taught how to use the template showed significantly greater improvement on holistic grades over those in the control condition. ❖ Over half of the students in the experimental group demonstrated a macro-aspect, global level structure on the post-test. ❖ All of the students in the experimental group used at least an appropriate local-level comparison structure on the post-test, indicating that the use of the template was successful in helping students structure their writing more effectively.
<p>Leadership</p> <p><i>School Leadership & Management</i> Vol. 29, No. 2, pp. 181 - 214</p>	<p>Murphy, J., Smylie, M., Mayrowetz, D. & Seashore Louis, K. (2009) The role of the principal in fostering the development of distributed leadership.</p> <p>This paper is part of a series of papers describing a comparison of three-year longitudinal case studies of distributed leadership initiatives in six schools. The paper mostly describes the situation in a single school, but draws on the researchers' experience in the other schools involved in the study as well as other research on distributed leadership.</p> <p>Findings / Arguments:</p> <ul style="list-style-type: none"> ❖ Overall the principal's role in a distributed leadership initiative is to appropriately <ul style="list-style-type: none"> (1) craft organizational structures (2) shape organizational culture <p><u>Problems with existing organizational structures in schools:</u></p> <ul style="list-style-type: none"> ❖ Institutional structures shape and define the relationships and patterns of interaction in organizations ❖ Existing structures in schools are hierarchical and bureaucratic and the values embedded in these structures are inconsistent with the norms needed to power distributed leadership. ❖ Existing structures are difficult to change because: <ul style="list-style-type: none"> (1) They are generally perceived to have worked

- (2) They benefit some people
- (3) They are the only one most educators know
- (4) They are not especially malleable

Rebuilding structures at Glencoe Middle School

- ❖ In selecting teacher leaders the literature suggests administrators need to be careful of perceptions of favoritism. At Glencoe these perceptions sometimes hindered the spread of leadership though in some cases the favoritism storyline was used as an excuse to avoid something a teacher did not want to do in the first place.
- ❖ One issue is the degree to which teachers are freed up to exercise leadership. No teachers was provided time to work largely outside the classroom at Glencoe.
- ❖ Across the 6 schools it was found that the creation of opportunities for collaborative work among teachers were the lifeblood of distributed leadership efforts. At Glencoe, block scheduling was introduced in order to create blocks of time for teachers to work together. Initially this alone was not successful as some faculty groups were unclear on how to productively make use of the time provided. The principal recognized this and responded by:
 - (1) appointing informal leaders for teams that didn't have one
 - (2) providing protocols to structure the meeting time in effective ways
 - (3) providing summary sheets which indicated the issues that had been engaged with in each meeting and the follow-up that was to be taken

Problems with existing school cultures

- ❖ Structural changes are necessary, but not sufficient, since the traditional cultural norms of schools can undermine distributed leadership initiatives. In particular the following norms, which emerge from research as being typical in most schools, are potential barriers to establishing distributed leadership:
 - (1) The norm of *autonomy* - includes the expectation that teachers will have freedom within their own classroom. This can breed a culture of isolation.
 - (2) The norm of *privacy and non-interference* - is closely linked to the norm of autonomy and includes the right to freedom of scrutiny from others and the reciprocal expectation that teachers will not meddle in each others' classroom practice
 - (3) The *egalitarian* norm - includes the belief that all teachers are more or less equal and that no one is a better teacher than anyone else.
 - (4) The norm of *civility* - includes a high press for cordial relations among faculty and a tendency to avoid confrontation and risk-taking. This norm leads to a preference for the status quo over change.
 - (5) The norm of *legitimacy* - sees the sole authentic work of teachers as classroom teaching.

(6) The norm of *separation of management and teaching* - is closely linked to the norm of legitimacy and sees the work of administrators as managing and the work of teachers as teaching.

Reshaping culture at Glencoe Middle School

- ❖ The principal is the key actor in shaping school culture to support new understandings of and forms of leadership. Research by Smylie (2002) suggests that principals need to know how to develop, support and manage these new forms of leadership.
- ❖ The principal used school goals as a means of creating a culture in which leadership was valued.
- ❖ The principal was active in identifying leadership opportunities in the school as well as identifying potential teachers to help meet those opportunities
- ❖ After 3 years of the distributed leadership initiative at Glencoe, all teachers held similar conceptions of what distributed leadership encompassed (even those who did not believe the school had achieved it). The researchers identify four factors contributing to the development of this shared conception:
 - (1) communities of professional practice brought together through common planning time
 - (2) an opportunity structure where action teams formed around various tasks
 - (3) identification of more discrete leadership opportunities by the management team (e.g. organizing a basketball tournament, arranging end-of-year ceremonies)
 - (4) the use of teachers from within the school to lead and direct professional development (teachers who received PD out of school came back and organized PD for their colleagues)
- ❖ In general there was considerable support for teacher leadership and a significant percentage of teachers had taken up leadership roles at Glencoe, though another significant percentage had not.
- ❖ The principal's 'informal' leadership style was seen as contributing to the success of distributed leadership at Glencoe. The principal did not decide everything up front. Rather things were given a broad direction and then adjustments were made as initiatives developed. Part of this leadership style included the principal stepping in to take care of problems that were impeding the work of teachers and teacher leaders
- ❖ Culture at Glencoe at the end of three years was found to have shifted with regard to some of the traditional norms of schools. There was less of a separation of management and teaching and the idea that difficulties should be worked through together rather than in isolation had become more prevalent. Though still evident, the norms of autonomy and privacy had become less pervasive, though the norm of egalitarianism remained.

Instructional Strategies – ESL / Science

Fang, Z. (2006) The language demands of Science reading in middle school.

This author of this article has examined middle school Science textbook and extracted the typical features which present difficulty for learners, particularly second language learners. The article concludes with suggestions for classroom activities to help students overcome

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Education* Vol.
28, No. 5, pp.
491 - 520

these difficulties.

Main Findings / Arguments

- ❖ Somewhere around Grade 4 the language used in school texts moves away from the concrete language everyday language of the world and begins to become more abstract and specialized. Unfortunately, it is also at this point that we reduce the amount of direct instruction in reading.
- ❖ Current instructional strategies for reading at the secondary level tend to focus on :
 - (a) Fluency-oriented strategies - repeated reading, chunking, prosody, monitoring.
 - (b) Cognitive and metacognitive strategies – predicting, inferencing, making connections, visualizing, think-aloud.While these strategies are important, Fang argues that they do nothing to help the student overcome the difficulties presented to students by the particular linguistic devices which each discipline uses to construe meaning.

Particular language difficulties encountered in Science texts

- Technical vocabulary
- Everyday words with different meanings of usages in Science
- Connective devices
- Ellipsis
- Nominalization
- Expansion of nominal groups
- Subordinate and embedded clauses creating complex sentences
- Passive voice

Strategies for helping students understand how these devices work

- Vocabulary Building - use the Latin and Greek roots, prefixes and suffixes
- Noun expansion - analyze noun phrases with students and give them opportunities to expand and elaborate nominal groups. Also, sentence completion exercises where students must synthesize information occurring previously in the text into a nominalization which can be made the subject of a subsequent clause.
- Complex sentences - use sentence stripping to explore the ways in which clauses are combined to form sentences in Scientific text
- Connectives - explicitly teach the connectives used in Science and how they are used as these form the signposts to understanding the logic of a scientific argument.
- Paraphrasing - having students translate back and forth between the Language of Science and Everyday Language can help them understand many of the features of Scientific language.

Curriculum Implementation

Journal of Curriculum Studies Vol. 41. No. 4. Pp. 467 - 500

Gamoran Sherin, M. & Drake, C. (2009) Curriculum strategy framework: investigating patterns in teachers' use of a reform-based elementary mathematics curriculum

These researchers conducted interviews and observations of teachers to determine the strategies they used to read, evaluate and adapt the curriculum materials provided by a mathematics program at three stages of the teaching process - before , during and after instruction. The information was plugged into a matrix which the researchers called a curriculum strategy matrix and was used to identify each teacher's curriculum interpretation strategies. The various strategies were then compared to see if there were patterns.

The matrix:

	Read	Evaluate	Adapt
Before instruction			
During instruction			
After instruction			

Main Findings:

❖ **Reading** - Three general approaches to reading the curriculum materials emerged:

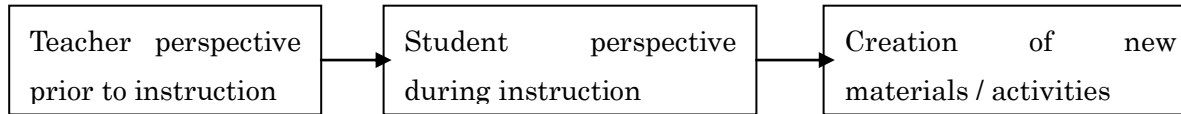
Read before instruction	Read during instruction
Read for <i>broad</i> overview	→ Did not read during
Read for <i>detailed</i> information	→ Did not read during
Read for <i>broad</i> overview	→ Read for <i>detailed</i> information

❖ **Evaluation** - Two general approaches to evaluation emerged.

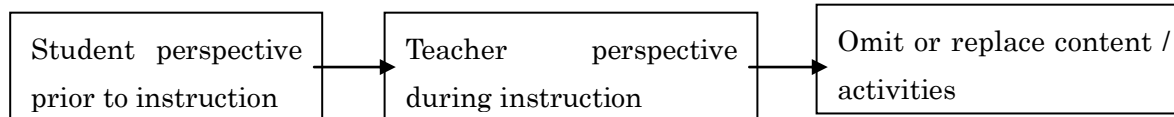
Evaluation before instruction	Evaluation during instruction	Evaluation after instruction
From <i>teacher</i> perspective - Do I understand the math? Am I sure what this concept means? →	From <i>student</i> perspective – Are the students getting the ideas? How are the students progressing? →	From perspective of <i>teacher, student and others</i>
From <i>student</i> perspective – Will my students grasp the material? →	From <i>teacher</i> perspective – Is my explanation adequate? What am I missing here in terms of math? How →	Did not evaluate after instruction

can I make sense of this?

❖ **Adaptation** - It was found that if teachers made significant changes and adaptations to the materials, there were three possibilities - they could *omit* content or activities, they could *replace* content or activities with others or they could *create* completely new activities. The most interesting finding to emerge was that there was a pattern that connected the approaches to evaluation and the approaches to adaptation.



Teachers who had focused on their own understanding prior to instruction were able to draw on these understandings to address questions and difficulties during instruction. They understood why particular parts of the lesson were included and how they connected to the whole and this allowed them to supplement the materials where necessary to achieve the objectives.



Teachers who had not used the curriculum as a resources for their own learning prior to instruction did consider their own understanding during the lesson, but as concerns arose they did not have enough time to work through their own questions and ended up sometimes just moving on to the next portion of the lesson.

Assessment

American Journal of Education, Vol. 112, pp. 572 - 588

Sharkey, N. & Murnane, R. (2006) Tough choices in designing a formative assessment system.

Interviews were conducted with various stakeholders in a US school district attempting to implement a systematic approach to formative assessment. Two commercial formative assessment instruments were selected for piloting. Additionally, a group of teachers developed a formative assessment instrument directly tied to the district's math curriculum and this was also piloted. The article identifies the primary issues faced by the district as they attempted to make decisions as a result of the pilot programs.

Main Findings / Arguments:

- ❖ Prior research has identified three ways in which educators use the results of formative assessments:
 - (1) Instrumental - for decision-making (eg. which students will be required to attend summer school)
 - (2) Symbolic - either to justify a decision that has already been taken or to support a predetermined stance
 - (3) Conceptual - to enrich dialogue about what students know, can do, understand, and how effective instruction has been
- ❖ The district sees four roles for formative assessment:
 - (1) To provide teachers with timely information on student achievement to inform instruction
 - (2) To provide principals with the information they need to develop improvement plans for students whose achievement is falling

behind

(3) To provide the superintendent with timely information to help identify schools that need additional help

(4) To allow the superintendent to predict the scores of district students on upcoming state math tests

Issues around designing a system

- ❖ Make or buy? – Commercial systems can be quickly implemented but can be expensive, and do not always test the same material as in the curriculum. They are also almost exclusively made up of multiple choice questions. In particular topics may be in a different order so students may be tested on something not yet covered. In-house systems depend on the capacity of the school / district to develop them, but have the advantage of buy-in and direct ties to the curriculum. Those involved in development and scoring also perceived this as a huge PD opportunity.
- ❖ Computer-based or paper-based? - Computer systems can be rapidly and easily scored and can quickly generate graphic summaries of data, but are exclusively based on multiple-choice questions. Paper systems can include open-ended questions. Though these can present scoring difficulties, collaborative scoring processes can also become valuable PD opportunities.
- ❖ Computer-adaptive? - Computer systems which adjust the questioning based on the way a student is answering have the advantage of being able to give more accurate information on students with varying abilities. They can also quickly provide information on growth over time. It can take a long time for higher ability students to be tested, however. In this district, higher ability students using computer adaptive assessments tended to take 2 – 3 times as long to be tested as other students.
- ❖ One problem in this district was that the purposes they were trying to achieve were varied, some conceptual, others more instrumental. This meant it was difficult to find one system that achieved all the purposes.
- ❖ In summary the researchers suggest two factors that are central to deciding how the various trade-offs can be managed to decide on a system:
 - (1) The relative importance of the goals / purposes of formative assessment within the school / district
 - (2) The capacity within the school / district to develop systems, analyze and use data.