

RESEARCH AREA & SOURCE	DESCRIPTION & MAIN FINDINGS / ARGUMENTS
<p>Curriculum Implementation</p> <p><i>Review of Educational Research</i> 47, 335 – 397.</p>	<p>Fullan, M. & Pomfret, A. (1977) Research on Curriculum and Instruction Implementation.</p> <p>A meta-analysis of a large number of implementation studies.</p> <p>Main Findings:</p> <ul style="list-style-type: none"> ● Curriculum change has five dimensions - (a) subject matter / materials (b) organizational structure (c) role / behavior (d) knowledge and understanding (e) value internalization ● Many educational innovations fail to become established and the main problem is that curricular change also necessitates organizational change, particularly change in roles and relationships. These changes are often left implicit. ● Some components of an innovation are more difficult to implement than others and role relationship changes appear to present the greatest difficulties. Even when the necessary role-relationship changes are made explicit in the plan, institutional factors can interfere with their being implemented. ● In-service training does result in a shift in behavior but on its own it is not enough. It is most effective when couple with regular meetings of staff where the problem-solving related to the implementation takes place. Teachers selected training that provided model units and demonstration lessons as most preferred ● Some studies found that principal's ratings of level of implementation did not correspond with teacher and researcher ratings ● One study found that the values of the new curriculum had been internalized in fewer than 20% of classrooms. Though about 85% of the teachers believed that students should be involved in selecting issues for analysis only 50% of teachers claimed to involve students and only 35% of students believe they were so involved ● There can be a danger of rigidity if we are too specific about defining implementation prior to implementing - some modifications may improve the model. In one of the largest studies (Rand), the researchers claimed that successful innovation requires users to work out their own adaptations. ● The writers of the meta-analysis conclude that the determinants of implementation are - <i>Characteristics of the Innovation</i> (explicitness, complexity), <i>Strategies</i> (In-service, resources, feedback mechanisms, participation), <i>Characteristics of the Adopting Unit</i> (adoption process, organizational climate, environmental support, demographic factors), <i>Characteristics of macro sociopolitical units</i> (design questions, incentive system, evaluation, political complexity) ● Low explicitness about what true implementation means can lead to user confusion and a low degree of implementation. In order to allow for adaptations to develop, the alternative to an explicit definition of implementation is to set up procedures for moving towards greater explicitness during implementation - <i>plans for explicitness</i>

	<ul style="list-style-type: none"> ● Lack of time and inadequate materials were identified as barriers to implementation in many studies ● There is too little data to say anything conclusive about how participation in the decisions of implementation by users affects the implementation ● One finding that stands out – effective implementation requires time, personal interaction and contacts, in-service training and other forms of people-based support.
<p>Teacher Development / Teacher Quality</p> <p><i>Journal of Curriculum Studies</i> 36, 257 - 271</p>	<p>Shulman, L. & Shulman, J. (2004) How and what teachers learn: a shifting perspective.</p> <p>The theories in this paper are based on a series of case studies of novice and veteran teachers analyzed to find out what teachers know that permits them to teach in a particular manner.</p> <p>Main Arguments:</p> <ul style="list-style-type: none"> ● Theoretical formulation of the component capabilities necessary for teaching: An accomplished teacher is a member of a professional community who is ready, willing, and able to teach and to learn from his or her teaching experiences. ● Ready – possessing vision, willing – having motivation, able – both knowing and performing, reflective – learning from experience and communal. Components are this - Vision, Motivation, Understanding, Practice, Reflection and Community. ● Discrepancies between one’s vision and one’s performance can create the motivation to learn. ● In addition to knowing teachers must be capable of performing ● Understanding in means understanding subject matter in a deep, flexible and generative way, comprehending pedagogical principles and being able to implement them, assessing variations in student learning ● Reflection is necessary for change ● Five clusters of attributes around which accomplished teaching develops - cognitive (discerning, understanding and analyzing), dispositional (envisioning, believing and respecting) , motivational (willing, changing and persisting) , performance enacting, coordinating, articulating and initiating) and reflective (evaluating, reviewing, self-criticizing and learning from experience) ● In addition sixth feature is a communal cluster relating to professional community that includes: deliberation, collaboration, reciprocal scaffolding and distributing expertise. ● Resources are indispensable
<p>Teacher Quality / Teacher Development</p> <p><i>Harvard</i></p>	<p>Shulman, L. (1987) Knowledge and Teaching: Foundations of the New Reform.</p> <p>Based on case studies of teachers Shulman developed his theory of pedagogical content knowledge outlined in this paper.</p> <p>Main Arguments:</p> <ul style="list-style-type: none"> ● Teachers need to be able to transform understandings skills, attitudes into pedagogical representations and actions - this is pedagogical content knowledge. ● Categories of the Knowledge Base for teachers: content knowledge, curriculum knowledge, pedagogical content knowledge,

<p><i>Educational Review 57, 1 - 22</i></p>	<p>knowledge of the learners, knowledge of educational contexts, knowledge of educational ends, purposes and values</p> <ul style="list-style-type: none"> ● Teachers must understand what the important ideas and skills in a domain are and how new ideas are added and deficient ones dropped in that area - the rules and procedures of inquiry. ● Teachers must have a flexible and multifaceted comprehension of the subject matter to deal with diversity of students – this includes knowing the various analogies, metaphors, examples, demonstrations, explanations etc, which may destabilize student misconceptions and guide students with varying levels of background experience with a concept to deeper understanding ● Purpose of PD is to influence pedagogical reasoning ● Comprehension of subject matter alone is not sufficient. Teachers must be able to use their knowledge for judgment and reasoning in pedagogical situations ● Model of pedagogical reasoning - comprehension – transformation – instruction – evaluation – reflection - new comprehensions ● Representation of subject matter in a pedagogical context involves thinking through key ideas in the lesson and identifying alternative ways of representing them to students - multiple forms are desirable ● New comprehension does not automatically occur after reflection by the teacher - specific strategies for documentation, analysis and discussion are necessary.
<p>Assessment / Curriculum Implementation</p> <p><i>Education Week July 16, 2007</i></p>	<p>Viadero, D. (2007) NCLB seen as curbing low, high achiever’s gains.</p> <p>This article analyzes research conducted in Chicago schools with 421,000 students. Two time periods were investigated where higher accountability was coupled to standardized test results and cohorts of students were compared prior to and subsequent to the introduction of the high accountability systems.</p> <p>Main Findings:</p> <ul style="list-style-type: none"> ● <u>Post-reform results</u> ● Students in the middle levels of achievement made the most gains ● The bottom 20% of students made the least progress and in some cases lost ground ● Students in the top 10% prior to reform made either no gains or their gains were smaller than those in the middle ● Researchers infer that the accountability mechanisms encourage teachers to focus on students close to the cut-off scores linked to accountability measures and largely ignore those at the ends in order to get their schools and themselves ‘past the post’ in terms of accountability
<p>Teaching Strategies / Curriculum Development</p>	<p>Harris, R. & Haydn, T. (2006) Pupils’ enjoyment of history: what lessons can teachers learn from their pupils?</p> <p>This study used questionnaires and focus group interviews to determine what pupils like and dislike about both how they are taught and what they are taught in history classrooms. The study was of 1740 pupils in between years 7 and 9 in England.</p> <p>Main Findings:</p>

<p><i>The Curriculum Journal</i>, 17, 315 - 333</p>	<ul style="list-style-type: none"> ● Teaching approaches make a significant difference to level of student interest in the subject. ● Students preferred interactive approaches with the most popular activities being role-play / drama & discussion / debate. ● The use of computer did not feature highly. ● Generally, in the schools where students indicated a high level of interest in history, the use of these interactive approaches was also mentioned often in questionnaires and interviews. This correlation suggests that not only are the activities popular, but lead to higher levels of interest in the subject. ● Despite this general correlation, there were anomalies with a couple of schools receiving frequent references to interactive techniques but having a lower level of student interest in the subject, suggesting that either these techniques were not used frequently or that they were not used effectively. ● Teacher personality and the quality of their interaction with learners was also perceived by students in the interviews to affect their level of interest in the subject. In particular enthusiasm, ability to explain things well and treating students as capable were considered positive factors. ● There was no discernible pattern in identifying whether any particular topic was more interesting than another. ● Other studies support the hypothesis that the learning process, rather than the content per se is what makes a subject interesting or dull. ● Pedagogy is important and needs to be considered alongside content and curriculum structures.
<p>Curriculum General</p> <p><i>SFGate.com</i> July 26, 2007</p>	<p>Schmid, R. (2007) Want to be good at Science? Math is key.</p> <p>This study compared 8,474 students taking introductory science courses at 63 US colleges and universities. They compared the effect of having studied Math at high school as compared to each of the three sciences – Biology, Physics and Chemistry.</p> <p>Main Findings:</p> <ul style="list-style-type: none"> ● Every year of HS Math added 1.86 points (out of 100) to a student's college chemistry grade. Taking chemistry in HS added 1.72 points and taking biology or physics had no significant impact. ● Results were similar for the other Sciences. Taking Math always boosted the grade. Taking the same science in HS boosted the Grade, but usually less than Math and taking the other sciences in HS had no effect.
<p>Leadership</p> <p><i>Educational Administration Quarterly</i> 43, 67 - 100</p>	<p>Scribner, J., Sawyer, R., Watson, S., & Myers, V. (2007) Teacher Teams and Distributed Leadership: A study of group discourse and collaboration</p> <p>This article is a case study of distributed leadership as it relates to two teacher teams performing specific tasks. The first team was charged with developing an integrated curriculum. The second team was charged with developing, reviewing and making suggestions for change of the school's practices and policies for ensuring the academic success of students in danger of failing more than one subject area. Through comparative analysis and discourse analysis the researchers isolated three constructs affecting the performance of the teams - purpose,</p>

autonomy and patterns of discourse.

Main Findings:

- The three constructs identified intersected to affect the performance of teacher teams
- The integrated curriculum team was solving a known problem, well understood by all team members and so had a *closed purpose*. The collaborative interaction within the team was characterized by close attention to well-understood tasks. Topics outside of the 'known problem' were either not raised or were dismissed with minimal discussion. This gave the group focus, but perhaps precluded them from searching for truly creative solutions...
- The integrated curriculum team experienced *enabling autonomy* in that they had the autonomy necessary to perform the task at hand as shown by the fact that they seldom referred to organizational constraints during discussion.
- This combination of *closed purpose* and *enabling autonomy* led to the group engaging in a great deal of *active discourse*, where commitments to action were made by group members and the group as a whole on a regular basis.
- The policy review group was attempting to identify a problem (why certain students were persistently failing) and make recommendations to improve the situation and thus had an *open purpose*. Though open purposes can lead to divergent thinking which often opens up the possibility of creative solutions, they can also overwhelm group members if the purpose is too broadly defined.
- Though the policy review group was given the freedom to make recommendation, these would ultimately pass through a hierarchical review process and the team experienced *disabling autonomy* as they perceived that they did not have the autonomy to fully explore all possible avenues for solutions. This was evidenced by the frequent reference to organizational constraints such as the preferences of the principal in their dialogue.
- The combination of *open purpose* and *disabling autonomy* led to the almost exclusive use of *passive discourse* where information was continually sought and shared but no action was committed to. This led to a great deal of frustration in the group.
- Administrators need to consider these three constructs when forming teacher teams for leadership. Teams with open purposes need to have their level of autonomy clearly defined and need to be supported so that they do not become overwhelmed by the task, though the line between support and surveillance is thin. Teams with closed purposes need to be given a stimulus if they are expected to develop creative solutions and consider the 'why' of their problem as well as the 'what' and the 'how'.
- Problem-finding teams require different treatment to problem-solving teams.
- The structures and social dynamics of distributed leadership must be attended to continuously and not taken for granted.

Teaching
Strategies

Laitsch, D. (2007) Design-Based Learning and Student Achievement.

This study compared two classes taught about the human respiratory system using an approach where students were required to design an artificial lung in groups with a class who was taught by more traditional didactic methods.

ASCD

Main Findings:

<i>Research Brief</i> <i>June 25, 2007</i>	<ul style="list-style-type: none">● The experimental groups outperformed the control group on all assessment measures and demonstrated a significantly deeper level of conceptual understanding after instruction than did the control group.● The experimental group was highly motivated by the task set.