

RESEARCH AREA & SOURCE	DESCRIPTION & MAIN FINDINGS/ARGUMENTS
<p>Educational Change</p> <p><i>International Journal of Science Education</i> 28, 919 – 944.</p>	<p><b>Waters-Adams, S. (2006) The Relationship between Understanding of the Nature of Science and Practice: The influence of teachers' beliefs about education, teaching and learning.</b></p> <p>Case studies of 4 teachers using action research as a vehicle to expose the dialectical relationship between teacher's beliefs about education, understanding of the subject of science and classroom practice.</p> <p><b>Main Findings:</b></p> <ul style="list-style-type: none"> <li>● All four teachers in the study espoused a hypothetico-deductive approach to science teaching, but this was not evident in their practice, which emphasized the transmission of received knowledge</li> <li>● The author posits the existence of a tacit understanding in addition to the teachers' espoused understanding as he says that situational factors external to the teacher do not account for the disconnect..</li> <li>● By the end of the study 3 out of 4 teachers had come to a position where their espoused beliefs were much more closely aligned with their teaching practice.</li> <li>● The teachers began to have confidence in their teaching only when it accorded with their deeply held beliefs about the purpose of education and so were much more confident at the end of the study (931).</li> <li>● The change from tacit understandings driving teaching to espoused understandings driving practice came about through teachers appraising their espoused beliefs and exploring the implications in practice (933).</li> <li>● Teacher's general beliefs remained constant - their understanding of how those beliefs might appear in practice changed.</li> </ul>
<p>Educational Change</p> <p><i>Education Week</i> May 14, 2007</p>	<p><b>Viadero, D. (2007) In Whole-School Reform, Staying True to Model Matters.</b></p> <p>A study conducted by the American Institutes for Research (AIR) where the progress of 650 elementary and middle schools was tracked. Half of the schools were implementing one of 8 packaged self improvement models and half were using no formal schoolwide reform program. The findings are based on longitudinal surveys of principals, teachers and district administrators, successive waves of test-score data and case studies conducted at 24 of the experimental schools.</p> <p><b>Major Findings:</b></p> <ul style="list-style-type: none"> <li>● In practice schools not using reform packages did not look all that different from those using them ( researchers postulate that what schools perceive as good ideas quickly spread to other schools)</li> <li>● Over the five years of the study there was no significant difference in student gains on math and reading tests between the two groups of schools.</li> <li>● On closer examination the results were more complex - between the third and the fifth year of implementation schools that had stayed true to their school improvement models experienced achievement gains that outpaced those of comparison schools</li> <li>● Experimental schools which had not adhered as closely to the reform program guidelines did not experience these increased gains and achieved results no different from control schools.</li> <li>● Some reform programs produced better results than others</li> </ul>
<p>Educational Change</p> <p><i>School</i></p>	<p><b>Cardno, C. (2006) Leading change from within: action research to strengthen curriculum leadership in a primary school.</b></p> <p>This is a piece of Action Research conducted in a New Zealand primary school by the administration team with external support by an expert. The admin team perceived that the curriculum leadership structure, comprising mainly subject teams was problematic and ineffective, largely due to a lack of role definition. The research began with the admin team clarifying the problem , followed by cycles of</p>

<p><i>Leadership and Management</i> 26, 453 - 471</p>	<p>meetings where information was collected from the whole staff and was then analyzed by the admin team, who suggested solutions, which were again brought before the entire staff. The admin team reflected on the process at the end of the 12 month project</p> <p><b>Main Findings:</b></p> <ul style="list-style-type: none"> <li>● The structure and process of action research allowed the admin team to investigate, analyze data and respond in a measured way and helped alleviate the tendency to ‘rush in’ with a solution.</li> <li>● The process allowed for collaboration within the admin team and with all sections of the school. The process began with the admin team and extended incrementally to others.</li> <li>● The action research process was a useful team-building exercise for the admin team</li> <li>● The external facilitator was decisive to the success of the project.</li> <li>● The principal cannot directly manage the quality of all teaching and learning. The principal’s role is to design structures and systems that ensure the work gets done in ways that are also educative and developmental for everyone involved.</li> <li>● Putting the systems in place is ‘first-order’ change. The change that occurs to teaching and learning as a result is ‘second-order’ change and also needs investigation.</li> </ul>
<p>Educational Change</p> <p><i>School Leadership and Management</i> 25, 171 - 190</p>	<p><b>Oplatka, I, (2006) Imposed school change and women teacher’s self-renewal: a new insight on successful implementation of changes in schools.</b></p> <p>This researcher interviewed 5 female teachers in Israel who had experiences self-renewal as a result of a major change imposed on them by the Ministry of Education. (Technology as a separate subject was dropped and included in the Science curriculum so that Technology teachers had to re-train as Science teachers). The reason female teachers were selected was that the majority of teachers in Israel are female. Apart from this the teachers were selected primarily because of their positive response to the change. The researchers hoped to establish the elements of the context which facilitate the positive response.</p> <p><b>Main Findings:</b></p> <ul style="list-style-type: none"> <li>● All 5 teachers highlighted the salient role their positive relationship with the principal played.</li> <li>● The higher status of Science teachers as opposed to Technology teachers in Israeli schools was highlighted by all 5 teachers</li> <li>● The experience of the 5 teachers during the change process involved increased self-concept, a discovery of latent potentiality, energy replenishing and enthusiasm, change initiation and updating of professional knowledge. Many of the teachers in fact were of the belief that if this change had not helped them towards self-renewal, they may have burned out as Technology teachers.</li> <li>● All 5 teachers participated in Professional Development aimed at re-training them as Science teachers.</li> <li>● Many, perhaps a majority of colleagues did not experience the changes so positively.</li> <li>● All 5 teachers had in common: an emotional commitment to students and their learning, a tendency to innovate and lifelong learning.</li> </ul> <p>The positive response of these teachers is contrasted with the depression, passivity, self-pity etc, documented by other researchers.</p>
<p><b>School Structures – Block Scheduling</b></p> <p><i>The Clearing House</i> v.75, n. 6 pp. 319 – 323</p>	<p><b>Evans, W., Tokarczyk, J., Rice, S. &amp; McCray, A. (2002) Block scheduling: An evaluation of outcomes and impacts.</b></p> <p><b>Rice, J., Croninger, R. &amp; Roellke, C. (2002) The effect of block scheduling high school mathematics courses on student achievement and teachers’ use of time: Implications for educational productivity</b></p> <p><b>Hackmann, D. (2004) Constructivism and block scheduling: Making the connection</b></p> <p>I have summarized the findings published in three articles here.</p> <p><b>Main Findings:</b> <b>Relating to student achievement:</b></p>

<p><i>Economics of Education Review v. 21, pp. 599 – 607</i></p> <p><i>Phi Delta Kappan v. 85 n. 9, pp. 697 - 708</i></p>	<ul style="list-style-type: none"> <li>• There are only a limited number of studies relating block scheduling to achievement and the results are mostly inconclusive. For example, Bateson (1990) and Rice et al. (2002) found that block scheduling led to a drop in mathematics achievement, whereas Walker (2000) found an improvement in math achievement.</li> <li>• One study of three US schools found that block scheduling resulted in improved academic achievement generally, including higher SAT test scores.</li> <li>• The studies are often problematic because they fail to control for the type of block scheduling (eg. two day rotations vs semester rotations where students only take each subject every second semester) and they rarely take professional development into account. More crucially, I could not find a single study which controlled for the type of instructional activities taking place.</li> </ul> <p><b>Classroom Practices</b></p> <ul style="list-style-type: none"> <li>• Studies generally found that the introduction of block scheduling led to changes in teachers' classroom practice. In particular it tended to lead to the use of more varied instructional activities and to more work with small groups and individual students. However, the introduction of block scheduling in the absence of a coherent philosophy of learning can lead to a situation where teachers implement a "host of relatively minor and disconnected instructional strategies simply to fill time"(Hackmann, 2002). One author noted the possibilities offered by block scheduling for implementing a coherent constructivist vision of learning.</li> <li>• There is some evidence that teachers felt they were able to cover concepts in more depth with a block schedule, though this was not linked to a particular assessment of student understanding of the concepts in question.</li> <li>• There is evidence that block schedules can lead to a reduction in the amount of homework that a student must do or that a teacher must mark on any given day. There is also evidence that block schedules may lead to students receiving more help with homework in class.</li> </ul> <p><b>Behaviour Issues</b></p> <ul style="list-style-type: none"> <li>• There is some evidence that block scheduling can lead to a reduction in discipline issues, with one school experiencing a decline in detentions of 50% ( Evans et al., 2002)</li> </ul> <p><b>Problems</b></p> <ul style="list-style-type: none"> <li>• The problem of substitute teachers cropped up regularly in the studies. Teachers must prepare much more detailed materials for substitutes to be able to cope with block schedules and substitutes were less able to improvise when needed. Often worksheets were used, which was not a suitable way of occupying students for an extended period of time.</li> <li>• Students in some studies noted that some teachers were less able to engage students for extended periods of time than others.</li> <li>• Some writers expressed the opinion that block schedules may be more suitable for some subject areas than for others.</li> </ul>
<p>Student Retention</p> <p><i>Contemporary Education, 61:4 p.204</i></p>	<p><b>Norton, S. (1990) Practical Alternatives to Student Retention.</b> A meta-analysis of research into student retention with suggestions for alternatives to the practice.</p> <p><b>Main Findings:</b></p> <ul style="list-style-type: none"> <li>● Retention does not increase learning readiness for most pupils</li> <li>● Retention does not increase learning</li> <li>● Retention does not improve socialization</li> <li>● Retention tends to promote discipline problems</li> <li>● Most current solutions to the problem are oversimplifications</li> <li>● In one study 48% of teachers and 26% of principals believe that retention is an effective strategy for dealing with at-risk students</li> <li>● In another study 89% of teachers thought it had been an effective strategy with their pupils</li> </ul>

	<ul style="list-style-type: none"> <li>● Well-informed parents can be instrumental in stopping the practice</li> <li>● “More of the same” is unlikely to produce positive outcomes and so intervention programs are far more effective than retention</li> <li>● Remediation is cheaper than paying for an extra year of schooling</li> <li>● High teacher expectations for all students are critical in ensuring student success</li> <li>● Organization of instruction by age-based Grades may not be the most effective method</li> <li>● Questions need to be asked about teacher effectiveness as part of retention decisions as students should not be punished for inadequate instructional; strategies.</li> </ul>
<p>Student Retention</p> <p><i>Journal of Educational Research</i> 87:2 p.69</p>	<p><b>Meisels, S. (1993) Failure in Grade: Do Retained Students Catch Up?</b></p> <p>Includes a meta-analysis of research into retention. The study then goes on to analyze the data on 16,623 8<sup>th</sup> grade students from 1,052 schools the National Education Longitudinal Study on 1988 in the US, the most comprehensive longitudinal study ever undertaken in the U. S. 2,075 of the 16,623 students in the study were reported to have been retained in Grades K – 3 and 1,128 were reported to have been retained in Grades 4 – 8.</p> <p><b>Main Findings:</b></p> <ul style="list-style-type: none"> <li>● Minority students were retained in significantly higher proportions than Whites</li> <li>● Male retainees outnumber females</li> <li>● More retentions were instigated by the school than by parents</li> <li>● Early retainees ( retained K – 3) had significantly higher grades than later retainees and also had significantly lower chances of having behavioral problems</li> <li>● Retained students had significantly higher incidents of learning, emotional and behavioral problems</li> <li>● Girls retained later were more likely to have emotional problems than boys were ( explained by researchers by the differing needs of adolescent girls for family and peer relationships)</li> <li>● Higher socio-economic status students had more emotional problems when retained early than lower SES students.</li> </ul>
<p>Marketing / School Websites</p> <p><i>TechTrends</i> 49.6.p. 34 - 40</p>	<p><b>Miller, S., Adsit, K. &amp; Miller, T. (2005) Evaluating the importance of common components in school-based websites: Frequency of appearance and stakeholders’ judged value.</b></p> <p>This study investigated the importance users gave to the inclusion of various features on a school website. A list of potential elements for inclusion on a school website was prepared from the relevant literature. Using the list 70 public school websites in Georgia were reviewed to see which of the features were most often included. The list was then used to survey 44 teachers, 286 students and 305 parents from a public elementary school in Georgia. Participants responded using a five point Likert scale from not very important to very important to each of the potential website elements.</p> <p><b>Main Findings:</b></p> <ul style="list-style-type: none"> <li>● The potential features in order of frequency of use among the 70 websites were: physical location of school, faculty and staff, school calendar, mission statement, educational links ( for teachers / parents / students), PTA information, school news, breakfast and lunch menus, school rules and policies, grade level information, classroom level information, copyright information, student work samples, community information, curriculum and standards, homework information, internet use policy.</li> <li>● Only five of the 20 potential features were included in more than 50% of the sample websites</li> <li>● The items most often included were those that are relatively static ( ie – do not require updating very often) such as physical location of the school.</li> <li>● Features that were frequently absent were homework information, internet use policy, community information and curriculum - these</li> </ul>

	<p>features are much less static and demand frequent updates.</p> <ul style="list-style-type: none"> <li>• There was a high degree of consensus between the three stakeholder groups as to what was most worthy of inclusion</li> <li>• The school calendar was rated highest by all three groups and community information was rated lowest or second lowest by all three groups</li> <li>• Parents and teachers rated student work samples lowest, whereas students rated this much higher – possibly because of safety issues perceived by parents and teachers.</li> <li>• All three groups ranked homework information relatively highly, though it was rated lower by teachers than by students and parents - possibly because teachers do not have the know-how to post it on a website themselves.</li> <li>• PTA information was rated much higher by teachers than by the other two groups - possibly because teachers are aware of the benefits of parental involvement in schooling</li> <li>• Result summary - high ranks by all stakeholders - school calendar, homework information / high ranks by two groups of stakeholders - rules of conduct (teachers and parents) / high ranks by a single group of stakeholders - links for students, school newsletter, grade level information (students) – mission statement, faculty information (teachers) – curriculum, classroom level information (parents).</li> </ul>
<p>Leadership / Recruitment &amp; Retention</p> <p><i>Leadership and Policy in Schools Vol. 8, No. 1, pp. 37 - 63</i></p>	<p><b>Brown, K. &amp; Wynn, S. (2009) Finding, supporting, and keeping: The role of the principal in teacher retention issues.</b></p> <p>The researchers interviewed principals at 12 schools which had low attrition and transfer rates for beginning teachers in order to determine the leadership styles and strategies that helped achieve these low rates.</p> <p><b>Main Findings</b></p> <p><b>Literature Review</b></p> <ul style="list-style-type: none"> <li>• Large schools tend to have lower turnover rates than smaller ones ( Ingersoll, 2001)</li> <li>• Large class sizes are associated with higher attrition ( Henk, Zahn &amp; Carroll, 2001; Kirby, Berends &amp; Haftel, 2001)</li> <li>• While pay and other factors influence attrition, teacher participation in decision-making, administrative support and school climate are statistically related to teacher turnover ( Ingersoll, 2001)</li> <li>• A third of dissatisfied teachers blame a lack of support from the principal as the key reason for their departure ( Ingersoll, 2001)</li> <li>• Teacher autonomy, class size and a collegial atmosphere are decisive factors leading to successful retention ( Southeast Center for Teacher Quality, 2005; Weiss, 1999)</li> <li>• Beginning teachers' decisions to remain at a school are strongly influenced by principal leadership and school climate ( Wynn, Carboni Wilson &amp; Patall, 2005; Wynn &amp; Patall, 2006)</li> <li>• Principal's support for mentoring and induction programs ( particularly those related to collegial support) plays a prominent role in the decisions of beginning teachers about whether to remain in a school ( Smith &amp; Ingersoll 2004)</li> <li>• The traits and strategies of 20 principals working in low-attrition schools were found to be passion and commitment, the ability to diagnose and resolve organizational problems, the provision of feedback, direct assistance, the creation of collaborative working conditions, involving teachers in meaningful decision making ( Charlotte Advocates for Education, 2004; Southeast Center for Teaching Quality, 2005)</li> <li>• Schools which have "integrated professional cultures' where teachers collaborate at all levels were more likely to retain new teachers ( Johnson &amp; Birkeland, 2003)</li> </ul> <p><b>This study</b></p> <p>The following styles &amp; strategies emerged from the interviews as being effective for recruitment and retention:</p> <p><b>Recruitment:</b></p>

## Various Topics

### Shared Values

- Try to find a 'fit' with both the other members of the team and with the vision of the school
- Look for teachers who care passionately about kids and their learning

### **Retention:**

#### Support / Needed Resources

- Be an advocate, protector and mentor for new teachers
- Be available to new teachers - 'open door' + visible presence
- Support the growth and development of teachers
- Ensure that the materials necessary for good teaching are available to teachers

#### Flexibility

- Situational leadership is crucial in meeting the needs of teachers, especially new ones.
- Establish relationships with new teachers
- Make the time to listen to new teachers
- Involve teachers in relevant decision-making on substantive issues
- Differentiate support based on the needs of individuals

#### Learning Communities

- Involve teachers in collective inquiry
- Expand teacher leadership capacity
- Provide time for teachers to collaborate and work towards shared goals