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**Reading Recovery and Beginning Reading Instruction:  
A Discussion Paper**

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# Reading Recovery and Beginning Reading Instruction: A Discussion Paper

## Introduction

Reading Recovery, an early intervention program for the hardest to reach beginning readers, is becoming increasingly institutionalized in Manitoba. There are eight training centres, located in Transcona, Hanover, Norway House, St. James, Kelsey, Morris-McDonald, Brandon, and Agassiz. Reading Recovery is not a packaged program per se, but individually tailored for each child, with a priority placed on reading books of interest at appropriate instructional levels, pacing, and engaging in message writing. The emphasis is not only on meaning-making but also on attending to the details of print. Given the costs associated with the program, an examination of advantages and disadvantages is in order. Among the beneficial effects are: the number of "at risk" students served by the program, the number of teachers and teacher leaders trained, and the instructional model - both the underlying philosophy and the lesson sequence itself. The profession in general benefits from the theory to practice emphasis on: (1) observation during real reading in order to inform ensuing instruction; (2) social interaction - teacher-student conversations that scaffold learning and demonstrate the use of multiple information sources to facilitate word identification (semantic, syntactic and visual cueing systems), thereby fostering strategy use and eventual reading independence; (3) matching children with appropriately levelled instructional materials that keeps them on the cutting edge; and (4) writing to slow down the complex processing required by reading in order to help beginners attend not only to letter sounds, letter details and letter order, but also to word segments, leading ultimately to the internalization of the code (Clay, 1982).

Reading Recovery teachers at the local level are trained by teacher leaders who undergo one year of full-time training as residents at a regional training centre, one of which is at the University of Toronto and one established at the University of Winnipeg in Western Canada for a three-year period from 1995 until 1999. Once certified as a teacher leader, Reading Recovery personnel train the local Reading Recovery teachers, work with "at risk" children, and make school visits to coach and advise practising Reading Recovery teachers. The teacher leaders also carry out management and administrative duties in connection with the program in their area, among them: (1) collaborating in the decision about when a given student should be discontinued from the program, (2) communicating with parents and administrators, (3) providing in-services for early years teachers within their schools, and (4) collecting data, including the number of children served and the number who have been successfully discontinued from the program - those who are reading as well as the average reader in their respective classrooms. Both the training and the on-site consultation maintain program fidelity.

Clay (1987) contends that the successful implementation of Reading Recovery into a school system requires change if the program is to survive - - change on the part of classroom teachers in terms of teaching beliefs, methods and strategies, change in terms of student achievement as a result of more reflective instruction, change in school organization to accommodate the program which is pull-out, and change in funding arrangements. Clay maintains that the program will remain only if it is cohesive and viewed as beneficial and cost effective. It is on precisely these elements that Reading Recovery is criticized: costs, stability of gains, and effect on school programming.

Costs One-to-one tutoring is costly. Clay (1979, p.10) maintains, however, that it is important to intervene early in order to prevent both the habitual use of "error behaviour" and the confounding effect of a negative self-image. Clay refers to such children as "tangled tots". Struggling readers, after only a few months at school, may feel that "[They are ] no good ... ". The entrenchment of ineffective reading behaviours and lack of confidence may be difficult to overcome. The gap between successful and unsuccessful learners only widens (Carter, 1984). As suggested by Spiegel (1995), early intervention provides positive, long term benefits. A basic premise of the Reading Recovery program, therefore, is to observe entering students (Clay, 1993). In New Zealand this means monitoring students in all-day Kindergartens at age five, and building upon their competencies by providing a responsive, literacy-rich environment. Then in their second year at school, those children not making progress, about 20%, receive individual tutoring, which is expensive to provide.

Start-up costs require a major initial investment. A central training site for teacher leaders who operate the regional sites must be established. In Canada one currently operates at the University of Toronto. While a training site for Western Canada previously operated at the University of Winnipeg, the University of Alberta is now being considered as a training site for the western region.

Training to be a teacher leader takes one year. Then within each region, the teacher leaders train up to twelve Reading Recovery teachers yearly to work in the schools and provide direct instruction to "at risk" children. Continued coaching in the year immediately after training is also provided. Often several larger districts band together to share these training costs. At present these costs are shared jointly by the respective school divisions and by Manitoba Education Citizenship and Youth.

Program costs may be disproportionate at the school level, however. In large schools with two, three and four grade one classrooms, costs may accrue because ideally the lowest-achieving 20% of the children should receive the intensive one-to-one instruction that Reading Recovery provides. Each student requires an intervention of approximately 20 weeks. At best, each Reading Recovery teacher then can only instruct 8 to 10 students in any given year (Hiebert, 1994). More than one Reading Recovery teacher in these large schools may be required. Delivering the program in very small schools, especially in rural areas, may also present a problem. With few students in a school, the Reading Recovery teacher may require travelling time and so be able to provide service to fewer numbers of students. The least needy of the needy may simply be left out.

Considered in a broader context, however, Reading Recovery may be cost-effective (Dyer & Binkney, 1995). These authors contend that Reading Recovery is relatively inexpensive when costs associated with the intervention are compared with costs associated with other efforts to meet the needs of low-achievers, such as setting up remedial programs or special education classes, providing additional paraprofessional support, retaining students in the same grade, or making school organizational changes that include instituting developmental kindergartens, and transitional or pre-first grade classes in order to reduce class size and provide more individualized instruction. The latter kinds of organizational changes may result, however, in lowered expectations and a watered-down curriculum.

In comparing costs associated with Success for All (Slavin, Dolan & Madden, 1991) with Reading Recovery costs, Shanahan and Barr (1995) found that Success for All was more expensive. These higher costs, they suggest, are attributed to the more comprehensive nature of the

Success for All program which has a mandate to improve overall student achievement, not just reading, and provide services to all students as well as their families, not just those deemed to be "at risk". In addition, Shanahan and Barr suggest that it is impossible to estimate the costs of the Reading Recovery program because the long term economic and social benefits are not available. They cite statistics from the Perry Preschool Project that found eventual savings in costs associated with drug and alcohol abuse programs, teen pregnancy, as well as delinquency and crime.

Still, costs must be justified. Hiebert (1994) cites data from Dyer (1992) that the number of students served in American schools by one full-time Reading Recovery teacher works out to be 9-10 rather than the ideal 16. The model in place in Manitoba at present is to have teachers employed as Reading Recovery teachers for half days only, and serve either as resource or classroom teachers for the remainder of the day. In Manitoba, Reading Recovery teachers consequently may see less than the average, 8 to 10 students each year, although this number may be further reduced when Reading Recovery teachers are in their training year. Hiebert contends that further study on the implementation of Reading Recovery is required in low-income neighbourhood schools - where students may lack previous experience with books, where students speak English as a second language and where absenteeism and mobility rates are high. Not all students who require Reading Recovery, in schools with demographics similar to these, can be accommodated if only 8 to 10 students are served. More than one Reading Recovery teacher must be provided.

A further concern is that, as Reading Recovery currently operates, there are no formal mechanisms to facilitate communication between the classroom teachers whose students are in the Reading Recovery program and the Reading Recovery teachers who are providing the intervention. Teachers likely need to make changes in their regular classroom instruction, especially when students are discontinued from the Reading Recovery program. Commensurate adjustments in classroom programming may be necessary.

Summary. Experts agree that intervening early to prevent reading difficulties, a important premise upon which Reading Recovery is based, carries long term benefits. Considered in a broader context, Reading Recovery is viewed as a cost-effective, alternative approach to accommodating the needs of "at risk" learners.

The model currently in place in Manitoba seems to have positive benefits. Not only do Reading Recovery teachers serve an appropriate number of students once they gain experience, but because they are employed only half-time in Reading Recovery, these beginning reading experts can provide other support services either as more effective grade one or resource program teachers.

Two important issues relating to cost are ensuring: (1) that all students requiring intervention are served; and (2) that the lines of communication between the Reading Recovery teachers and classroom teachers are created. This latter issue, lack of cohesion between the Reading Recovery program and the classroom program may be a factor in regard to stability of gains once students are discontinued from Reading Recovery.

Stability of Gains Based on her own follow-up, New Zealand-based research, Clay (1993) finds that most Reading Recovery students sustain their gains once returned to the classroom. Only a few lag behind. While Pinnell (1989, pp.175-176) reported that Reading Recovery students retained their gains and continued to make progress "at least two years after the intervention", in a literature review, Shanahan and Barr (1995) suggest that while the reading performance of students who received Reading Recovery in grade one may drop below that of average students in grade two, by grade three the performance of Reading Recovery students is similar to that of average students. They conclude, however, that students who completed Reading Recovery in grade one may require continued support.

A number of problems with the research design of studies that purport to document the long term effects of Reading Recovery have been documented, including: (1) the similarity between the measures used to evaluate the program and the activities regularly carried out in the Reading Recovery program, (2) failure to include in the experimental sample students who received Reading Recovery instruction but were not successfully discontinued; (3) dwindling sample size due to attrition over time; and (4) the phenomenon of regression to the mean, that is those who score low initially score higher upon subsequent testing. Shanahan and Barr (1995) suggest the use of residual gain scores in evaluating the long term effects of Reading Recovery by projecting expected scores, based on initial performance, and making statistical comparisons between the projected scores and actual end scores. They contend that these differences better reflect differences in learning rate.

Wasik and Slavin (1993) similarly criticize the research on the long term effects of Reading Recovery for leaving out students who fail to discontinue. They point out, nevertheless, that the American research has included these students. They concede benefits for Reading Recovery students based on a number of Ohio studies (Deford, Pinnell, Lyons & Young, 1988; Huck & Pinnell, 1986; Pinnell, Short, Lyons & Young, 1986; Pinnell, 1988; Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1991) that randomly

assigned students to tutored and non-tutored control conditions. Reading Recovery students who had been discontinued were reading at levels similar to the level of their average classmates. Students who had not been successfully discontinued, who made up 27% of the Reading Recovery program students, still read at levels below that of their classmates in grade three. Further analyses of the longitudinal study carried out in 1990 by DeFord and her colleagues, that compared the performance of Reading Recovery students to Chapter I students, revealed a Reading Recovery effect size of .78 in grade one and .25 in grade three (Hiebert, 1994). Positive effect sizes were also found in the 1994 study conducted by Pinnell and her colleagues. In addition, participation in Reading Recovery increased the chances that students would be promoted, while their counterparts were retained or placed in special education classes. Reading Recovery students seemed to excel on two critical measures of reading achievement, first, the ability to write words in dictated sentences, and second, instructional reading level, which because it involves real reading is the test with the most face validity. Results were less robust when standardized tests were used as an outcome measure.

Manitoba Reading Recovery data reflect the findings at Ohio State that participation in the Reading Recovery program leads to greater than expected reading gains. Using 1998 -1999 data, in which instruction was provided to 1,385 "at-risk" beginning readers in 174 schools, findings indicated that 75.4% of the participating students (n = 765) were successfully discontinued, 16.4 % (n = 166) were referred for reading specialist or long term support, 5.3% (n = 54) left school with incomplete programs, and 2.9% (n = 30) were progressing but unable to continue. This compares positively to the Canadian outcomes for 1995-96 which show that 1,718 "at risk" beginners (69%) had completed the program successfully, 184 (7%) had responded but were not able to be continued, 153 (6 %) left before completing the program, and 444 or 18% were referred for long term, specialized help.

Few studies have examined the internal components of the Reading Recovery program which teaches sound-letter correspondences through letter patterns and by having students write messages. Phonological awareness is developed by having students listen for sounds in the words they want to write and illustrating the sound-symbol relationship in a very concrete way by using graphic representations or boxes for filling in the corresponding letters. Iverson and Tunmer (1993) investigated the teaching of sound-letter correspondences by establishing two experimental conditions, one in which Reading Recovery students received stepped-up explicit and systematic phonemic awareness instruction and the other in which Reading Recovery students received conventional Reading Recovery instruction. They found no significant differences between the performance of the two groups except that the phonemic awareness training group reached the level of their average peers more quickly. Unfortunately, few details about the conventional Reading Recovery program were provided. Pressley and Harris (1994) question these research findings, contending that investigators all too often set up "straw men", in this case phonemic awareness training, which is consistent with their instructional beliefs, ultimately destroying the integrity of the study. Such studies, these investigators suggest, need to involve the developers of the comparison treatment to ensure the validity of the alternative intervention.

What seems to set Reading Recovery apart from many programs for "at risk" students are both the holistic nature of the program as well as the individualization of instruction. When a child experiences difficulty, a preselected program sequence is not instituted. Rather, depending on both the child and the judgment of the teacher who uses daily running records to inform instruction, lessons are developed that may include emphasis on monitoring for meaning, error detection and the teaching of strategies during real reading to enhance the use of multiple cueing systems for word recognition, based on what the child can already do (Dorn & Allen, 1996). Flexibility, rather than programmed learning, is key in Reading Recovery. Instruction is based on the needs of each child.

The Pinnell, Lyons, DeFord, Bryk, & Seltzer (1991) study compared the effectiveness of Reading Recovery with that of three alternative programs, one of which used Reading Recovery but provided only two weeks of teacher training, one which employed one-to-one tutoring on skill development using direct instruction, and one that engaged students in both reading and writing. Findings revealed that the reading-writing group made the most gains, but this effect was confounded because the teachers in this condition had had one year of training in Reading Recovery and at least one year's experience in teaching Reading Recovery. Variability in teacher quality and expertise may therefore account for disparities in the success of beginning reading intervention programs.

Reading Recovery program teachers are highly trained and supported. In contrast, deficiencies in regular classroom reading instruction could also explain why some Reading Recovery students may not maintain gains once discontinued. Subsequent classroom instruction may not continue to enhance reading performance because: (1) once back in the regular program, students may not be challenged; (2) fewer instructional demands may be placed on them; and (3) instructional materials may not keep them on the cutting edge. Gains will be maintained only with responsive classroom instruction in which additional intervention is made available as required.

Summary. In order to sustain Reading Recovery reading gains, continued support as students move up through the grades seems necessary. Teacher expertise is seen as a critical factor in student success. To complement the Reading Recovery program, then, systematic changes are also necessary in classroom instruction. More coherence between the Reading Recovery program and the regular classroom reading and writing program is essential. A number of authorities have addressed this issue.

Effect on School Programs What accounts for the mainly positive, long term effects of the Reading Recovery program? While Shanahan and Barr (1995) suggest that the instructional format and tutorial delivery model may be necessary, they contend that they are insufficient in explaining the success of the program. Other factors that contribute to the effectiveness of Reading Recovery are the year-long teacher training, the curriculum, the comprehensiveness of the instructional model, and the one-to-one tutoring. Although the tutorial component is a positive aspect, as with teaching, the quality of the tutoring has a significant impact. Simply having aides work in classrooms has only minimal effects when the only difference variable is increased time on task (Slavin, 1993). Trained, certified teachers, or para-professionals working under the

supervision of experts, together with instruction appropriate to particular students are necessary.

Clay (1993) contends that the needs of the hardest to reach children should not serve as the basis for designing classroom reading programs. Still conventional wisdom suggests that lessons learned in Reading Recovery training will benefit classroom instruction. "What a teacher knows [about] how to teach is critical to the potential success of the student" (Long, R., Ellberger, R., Farstrup, A., Roberts, D., & Siegel, K., 1996, p.44). Accordingly, some school divisions in the province of Manitoba purposely set out to ensure that all of their grade one teachers have the opportunity to participate in Reading Recovery training. They teach in the Reading Recovery program for one-half of the day and in a regular grade one class for the other. Other school divisions in the province include only their Resource teachers in Reading Recovery training based on the premise that as a result their tutoring will improve. A number of studies (Pinnell, Short, Lyons & Young, 1986; Center, Wheldall, Freeman, Outred & McNaught, 1995; Montebruno, 1996), show no significant impact on the regular school program when Reading Recovery is introduced into a school. As suggested earlier, failure to provide formal channels of communication between the two programs may explain this phenomenon. Because of inadequate training, regular classroom teachers may fail to understand theories implicit in the activities they use to teach beginning reading. Even the part-time training of Reading Recovery teachers, that extends over a one year period with follow-up monitoring in Year II, does not easily transfer to instructional change in complex classrooms (Shanahan & Barr, 1995).

Summary. Authorities, including Clay, suggest that the Reading Recovery program does not easily carry over for implementation in complex classrooms. Experts have nonetheless borrowed from Reading Recovery theory in adapting classroom programs, especially the following fundamental premises that it is important to: work with children before they fail in reading, focus on both reading and writing when teaching beginning reading, carry out ongoing assessment to inform instruction, and teach strategies to promote independence (Taylor, Short, Shearer & Frye, 1995). Clay's Reading Recovery Program, at the very least, then, has caused educators to reflect upon the approaches they use to teaching beginning reading, especially to low-achievers.

Classroom Adaptations Taylor and her colleagues sought answers to the question of whether classroom teachers willing to spend an extra fifteen to twenty minutes a day working with from 5 to 7 of the lowest-achieving children under the direction of a resource teacher could provide effective instruction. They called their program Early Intervention in Reading (EIR). With three days being spent on each story, the components were: (1) repetitive storybook reading and the writing of story retellings; (2) phonemic awareness training within the context of the stories being read; and (3) similarly, teaching strategies for word recognition within the context of real reading. While the results were not as dramatic as those attained in some other programs, including Reading Recovery and Success for All (Slavin, Madden, Karweit, Dolan & Wasik, 1993), the effect size for reading was + .48, which Taylor described as encouraging. Taylor (1998) has since worked with school divisions to modify their existing programs and extend elements of the EIR program upward to Grade 4 and

downward into Kindergarten. Some EIR students become successful only after they have completed Year II or the program.

Similarly, Hiebert, Colt, Catto and Gury (1992) designed and tested a model for small group instruction in a re-structured Chapter 1 program directed at low-achieving first grade students. The model employed authentic literacy tasks but with word building embedded. Teachers worked with small groups of children with similar characteristics in grades 1 and 2 for fixed lengths of time, carried out continuous assessment to inform instruction and monitor progress, matched students with storybooks at levels that kept them on the cutting edge, and used words from the storybooks children were reading as a basis for instruction on how words pattern. As measured by performance on an informal reading inventory, by the end of Grade 2, 87% of the 40% of low-achieving students were reading at or above grade placement level as a result of the intervention. Effect sizes for word recognition were +1.39 and for reading +1.16, meaning the experimental group outperformed the control group by more than one standard deviation. While many teachers in the control group believed that learning to read is natural and developmental, and that children become literate if they are simply immersed in reading and writing activities, the results of this study support the notion that when the curriculum attends to differences in literacy experiences, schools can meet the needs of "at-risk" students. Children gain from discussions that attend to features of written language, including the letters and their sounds and how words form (Hiebert, 1994).

Dorn and Allen (1996) also reported success for a small group intervention that targeted the "at risk" children placed on a Reading Recovery waiting list. The project was first piloted in four Reading Recovery schools, but in the third year of implementation, twenty-eight Reading Recovery schools participated. Children who received the small group instruction, plus Reading Recovery, were successfully discontinued from Reading Recovery in less than half the time required by Reading Recovery only children, while 30% of those receiving only the small group instruction reached average levels of reading performance without participating in Reading Recovery.

Crevola and Hill (1998) decry the fact that a disproportionate number of students are not successful in beginning reading. Initially, teachers in their project, entitled The Early Literacy Research Project (ELRP) that took place in Victoria, Australia, voiced concerns that a non-English speaking background and lack of appropriate preschool experiences with books were impediments to learning. Teachers believed that no amount of teaching could make up for these differences. Their project highlights the importance of a school plan and the role that teacher expectations play in helping children become literate.

Citing Clay and Tuck (1991), Crevola and Hill identified "three waves of teaching". In what they describe as "the first wave", they advise that, with good first year teaching, 80% of the students will be successful with regular classroom instruction. They suggest that a "second wave", in their case Reading Recovery, is necessary to reach the next 18% of the students. The remaining 2 % of the students, representing the "third wave", require referral or specialized assistance.

While over 400 schools expressed interest in taking part in the project, 25 primary schools and 25 control schools with children within the age range of 5 to 8, ultimately participated. Instruction was not based on a predetermined sequence, as once was the case in Manitoba with published basal reading series. Instead the program was based on assessment to inform subsequent instruction. The elements of the two hour language arts block that teachers implemented under the guidance of specialists, for reading included: opportunities for developing oral language, reading to children, language experience that involved both reading and writing, shared reading, guided reading, and independent reading. For writing, program elements included shared, interactive, guided and independent writing. In addition to high expectations and targets, teachers became proficient in keeping daily running records to ensure that in guided reading instruction students were using books commensurate with their reading ability, this in addition to their balanced program that also focussed on enjoying storybooks read aloud, responding in literature circles, and providing opportunities to engage in shared and independent reading. A school-based program coordinator was appointed. Depending upon the size of the school, this position was either 0.6 or full time. The Reading Recovery program directed at "second wave" students was also in effect. In addition to training sessions before the start of the school term to learn how to administer assessment tests, staff also attended four professional development training sessions throughout the year to connect theory with practice.

Crevola and Hill report positive first year findings. Project results demonstrated dramatic overall gains in trial school student performance compared to control school student performance. Among the factors investigators identified as having a negative impact on school progress were:

frequent interruptions together with curriculum overload; large class sizes, particularly in the preparation year; lack of coordination, collective ownership and team building; absence of systematic assessment; lack of focus on language development, especially at the pre-emergent level and for students with inadequate English; failure to match students with reading material at their instructional level; few multiple book copies or text sets; difficulty organizing classrooms to provide for small-group work and guided reading; and preschool programs that failed to provide rich literary experiences. Their conclusions suggested that... without specific intervention, the problem of lack of early success is perpetuated. Without a deliberate, sustained approach to literacy intervention, there is little hope of making lasting improvement in disadvantaged school settings. (p.150)

Local initiatives. Spurred on by the success of the Reading Recovery program and the realization that early intervention is necessary in the prevention of reading difficulty, a number of Manitoba schools are making changes in their beginning reading programs. One such project, Reading for Success, was piloted at Sun Valley school in the River East School Division (Cochrane & Vermette, 1999; Zakaluk, 1999). The main feature of the program was to identify at risk students in September and after the Thanksgiving weekend, providing 60-70 minutes a day of small group instruction from the resource teacher and trained and supervised para-professionals in a pull-out program. Results from 1998-99 have been gratifying. In June, sixteen of the 17 "at risk" students from the

three, grade one classrooms, were reading at levels comparable to their average classroom peers.

The pull-out program resulted in changes in classroom instruction as well. The use of Clay's Observation Survey measures provided hard data about student strengths and needs, resulting in a much more focussed school plan with the principal, vice-principal, classroom and resource teachers working as an integrated team. Teachers singled out having resource teacher help at the very beginning of the year, rather than in January, as an important factor in the project's success. Having used Clay's (1993) observational survey to screen students in September of the school year, the teachers were better able to individualize instruction by providing small group guided reading instruction within their classrooms as a supplement to their regular language arts program. Small group reading within the context of the larger program allowed for: (1) ongoing assessment through the compilation of running records that informed subsequent instruction in the teaching of strategies, and (2) the development of mini-lessons on how words form. In this way, many of the instructional components for teaching struggling beginning readers first advocated by Clay (1987, 1993) and subsequently adapted for classroom implementation by Fountas and Pinnell (1996) were incorporated into the language-based, classroom routines. One surprising result was that fewer children were referred to the principal's office because students were receiving individualized attention at levels at which they could succeed and they had positions of respect or status in the school, relating to the principal on a first name basis. At the end of the year, teachers were able to say with certainty that students had become successful readers. This project has been expanded in 1999-2000 to follow the progress of the first year students into Grade 2 and to include the Grade 1 classes in three more schools in the division.

In 1997-98 and again in 1998-1999, Kent Road school in the Winnipeg School Division also began a classroom-based early-intervention program with small group guided reading serving as the core (Cockram, 1999). Grade 1 students were the focus in Year I of the project. These students were followed into Grade 2 in Year II, using Clay's Observation Survey to identify students who were at-risk. Integral program components, patterned after the ideas in Clay (1993), Fountas and Pinnell (1996), Taylor and her colleagues (1995) and Cooper, Pikulski and Au (1997) included: introducing a book of the week, providing opportunities for shared, guided, and independent reading, working with words and writing sentences on alternate days, developing and reading a story summary to take home, and keeping weekly running records of students' reading progress. Findings revealed a significant reduction in the number of Written Instructional Plans (WIPs) required, for Grade 1 - from 65% in the Fall of 1998 to 28% in June, 1999, and for Grade 2 - from 52% in the Fall to 24% in June. This year, students are being followed into Grade 3. What mattered most as a result of this initiative, according to project organizers, was that "each and every child at Kent Road School saw himself/herself as a reader." (p.9)

The Hanover school division (Froehlich & Burgess, 2000) also initiated an early intervention literacy program in 10 elementary schools in 1997-98, although one-to-one tutoring rather than small group instruction was implemented. Classroom teachers identified at risk students who made up approximately 25% of the Grade 1 population in

the division (N = 119). From this group, 47 were randomly selected to receive one-to-one tutoring every second day, beginning in January of 1998. When the performance of the intervention group was compared to that of the remaining students who served as controls, data indicated that while all students made gains, the students who received the intervention benefited more overall from the direct, systematic instruction and guided practice.

Summary and discussion. In addition to Reading Recovery, lack of early success for approximately 20% of beginning readers has served as a catalyst for developing a number of effective instructional interventions, many of which have lower implementation costs. Locally, initiatives in the River East, Winnipeg, and Hanover School Divisions suggest that attending to the needs of at-risk students early in their school careers leads to increases in reading performance. Further afield, a number of initiatives show promise, including Taylor's Early Intervention in Reading (EIR), Hiebert's re-structured Chapter 1 program, Dorn and Allen's project that focussed on children placed on a Reading Recovery waiting list who received training in phonemic awareness, as well as the large scale Australian project carried out by Crevola and Hill. Findings both from local projects and the Crevola and Hill research contain many of the same elements and seem to echo findings outlined by Taylor, Pearson, Clark, and Walpole (1999) in a more recent, 1999 American study which defined effective schools as implementing a comprehensive approach to beginning reading instruction. Using a national survey, Taylor and her colleagues also collected data on the reading performance of low and average readers in the fall and spring, identifying the following factors that linked effective classroom teaching with effective school programs.

Spending time in small-group reading instruction, including teacher-directed reading lessons using both narrative and informative text, literature circles, and instruction that emphasized phonics, the development of a meaning vocabulary, and comprehension activities.

Working collaboratively in the delivery of reading instruction that helped teachers provide for small group instruction by pooling teacher resources - - Title I, reading resource, special education, and regular teachers, including those involved teaching English as a second language - - with resource teachers either coming into the classroom for 60 minutes a day or children, in ability groups of three or four, going to resource teachers for 45 minutes a day to maximize individualization.

Implementing regular, systematic assessments and early intervention to accelerate growth.

Spending time in the independent reading of real books, approximately 28 minutes a day compared to 19 minutes per day in the least effective schools.

Coaching and prompting students on-the-spot during the reading of whole text in regard to how to apply the word analysis techniques they were learning, this in addition to the teaching of phonics in isolation, and working with words and word families through manipulating word cards and writing and reading words.

Asking a balance of text-based and higher level questions in comprehension instruction as well as encouraging divergent thinking by having students write open-ended, more aesthetic responses in reading logs.

Communicating with parents - by telephoning home once a month, and sending home weekly notes, newsletters, and/or literacy portfolios, and

Making reading and student engagement a school priority.

Insights into beginning reading instruction based on these classroom interventions suggest that a balanced, comprehensive and sustained approach to the teaching of literacy is required in order to guarantee success for all learners.

Conclusions Findings from the International Adult Literacy Survey (IALS, 1996) suggest that many Canadian adults cannot read and write well enough to function effectively in their daily lives. Costs to society in the long run are prohibitive. It is imperative that we improve the way we teach beginning reading. It is clear from this literature review that the Reading Recovery program has merit. Intervening early to prevent reading failure is imperative. There will be costs, but these monies may reap greater benefits than those realized from other school adaptations, especially if there is staff collaboration across grade levels and programs. Costs thus have to be weighed against long term benefits. Approximately 20% of beginning readers may require one-to-one tutoring by the "best" trained teachers.

Some local adaptations based on Reading Recovery principles also show promise. These can be even more cost effective than Reading Recovery. Depending upon demographics and the needs of particular schools in particular areas, various combinations of individualized and small group interventions may be desirable, but corresponding organizational changes in schools are required to make more effective use of existing resources. Teachers may require more extensive professional development and support in order to integrate small group guided reading into their existing language-rich programs. Small group guided reading facilitates the provision of instructional responses that meet individual needs. Such small group instruction also enables regular teachers to accommodate Reading Recovery students as they return to the classroom. Better articulation across programs and across grade levels is imperative. Some modification of the "waves" of intervention described by Crevola and Hill (1998) may be in order with the classroom representing the first "wave", small group guided reading the second, Reading Recovery the third, and long term one-to-one intervention the fourth.

Despite being adamant that the Reading Recovery program was never designed for classroom use, based on theoretical grounds, Clay has demonstrated the importance of including a number of components in the teaching of beginning reading, among them being: the reading and re-reading of familiar text, the necessity of ongoing assessment to inform instruction, word analysis to teach letter-sound correspondences, interactive writing to slow down processing and reinforce the learning of sound/letter correspondences, matching students with material at their instructional level, as well as coaching students on strategy use. The teacher leaders in Clay's program also played a

critical role in helping teachers develop sound teaching practices. Many of these elements have been incorporated into the effective schools described by Taylor and Pearson and their colleagues (1999), and a number of these principles are being implemented in Manitoba schools now. As Clay (1987), herself, contends, systematic changes at the school level are required for success in teaching beginning reading. More and better coherence between the intervention programs and the classroom program is needed.

**Recommendations** Despite intensive critical examination, Reading Recovery has been shown to be successful. Marie Clay has made a significant contribution to our theoretical understanding of how to teach struggling beginning readers. Approximately 2 % of the students who have received intensive instruction in Reading Recovery require further instruction in order to become successful readers. A number of less expensive alternatives to Reading Recovery have also been shown to be effective, some being provided currently at local levels. More long term research regarding the efficacy of these programs is required. At the very least, this literature review suggests that comprehensive and sustained approaches are required to ensure reading success for all beginners. The following recommendations to improve programs for beginning readers are suggested.

1. For long term benefits, initiate better articulation between the Reading Recovery program and the regular classroom reading and writing program, including Kindergarten. A school plan needs to be in place.
2. Provide more support to regular classroom teachers in instituting changes to their existing classroom literacy programs, especially the addition of guided reading instruction and more writing within the reading lesson to reinforce the understanding of sound/symbol correspondences.
3. Depending on community demographics, continue to implement Reading Recovery so that it realizes its fullest potential. If costs are prohibitive, introduce modifications such as: (1) those initiated by Dorn and Allen (1996) in which students on the Reading Recovery waiting list, over and above their literacy-rich programs, received explicit training in phonemic awareness while being temporarily deferred; or (2) modifications of Taylor's EIR program now being implemented locally at Kent Road school (Cockrem, 1999) and pilot schools in River East School Division (Cochrane & Vermette, 1999; Zakaluk, 1999).
4. Consider introducing extended-day Kindergartens in communities in which there are few reading models, where beginners come to school not having been read to and not understanding the language of instruction - what a story is, what a word is, what a letter is... In New Zealand where the Reading Recovery program was first initiated, the age of school entry is five. Children attend school all day from the very beginning. The first or Kindergarten year program is filled with authentic opportunities to experience the pleasure of books, engage in extended conversations, and learn to read by writing. The majority of children (80%) learn to read in this environment, which is articulated upwards through the grades. At the very least, re-examine existing kindergarten programs to ensure the existence of print-rich learning environments.

5. Communicate more with other social service agencies and become involved in joint ventures with education, justice and health through the Child and Youth Secretariat so that programs reach needy parents and their youngsters early.
6. Of nagging concern is the plight of approximately 2% of the beginning readers who start to make gains but fail to continue in Reading Recovery because of time constraints. We need to provide for these students. While such specialists as speech and language clinicians are funded with provincial support, perhaps more consideration needs to be paid to bringing more reading specialists, such as reading clinicians, on board. These highly knowledgeable professionals could assume more responsibility in meeting the needs of these low-achieving students.

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This is a brief review of a complex body of educational research. Since no brief review can capture a full body of research, readers are urged to consult the references which have been cited. The views expressed in this notebook are those of the author. The sponsors welcome your comments on this issue and your suggestions for future issues of Educators' Notebook.