

International Perspectives on the Reading Recovery Program*

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The Opportunity

*I used to just throw my book
down because it was too hard
to read but now I can read any
book in the world.*

— A Reading Recovery student

That is what Reading Recovery (RR) does. It puts a limited number of children who might have been confused by early literacy instruction back in touch with the communicative arts. It is an early literacy intervention program designed for children who clearly show that they have already become at-risk in literacy learning in their classroom program. Two of Her Majesty's Inspectors in Britain studied RR in operation across New Zealand and responded that, "It is much more than a set of procedures to be used with a child. It is a way of establishing an early intervention program in an education system in order to reduce reading and writing difficulties in the primary school" (Frater & Staniland, 1994). Any child entering the program is taken from where he is to somewhere else, working up from what he already knows, using his strengths and what he does well. The lessons are individually designed, differ from day to day, and emphases change according to individual need across the series of lessons.

Analogies can be misleading but let me try one. The instruction is not a packaged recipe for all learners and it cannot work for a whole class of children. It is more like a dose of antibiotics, taken only when essential, after professional appraisal, given as a full course of treatment, and varied to suit the precise condition of each individual.

We aim to minimize a seemingly chronic problem found in every country with universal education—reading difficulties. To cope with this problem in the past, education systems have expanded legitimate labels like learning disability and dyslexia to cover children who do not need those labels, and administrators have tried remedial approaches one after another with extremely limited results. Societies have come to accept literacy difficulties as always being with us but have settled for much greater numbers than are necessary.

Reading Recovery research presents a challenge to this state of affairs, suggesting only 1–2% of an age cohort in school will require assistance with literacy learning which starts early and continues for several years. Other lowest achievers between 6 and 7 years can become readers and writers. The special situations that allow the lowest achievers to learn quickly and catch up with their classmates involve

teaching them one at a time, and not in a prescribed sequence such as occurs in class or group instruction. If we problem solve each individual case we are able to hand over literate 7-year-olds to the education systems with an inner control over literacy learning which enables them in a good classroom program, to continue to learn within the average band.

Across the world RR is a target for copyists who want to help more children. These innovators modify, simplify, and design cheaper versions that make the very compromises that have led to weak solutions to this problem in the past. They advocate, but they do not observe, develop, try out, research, check, and provide data. They live by assurances or single demonstration with a case or small group. It seems that few people are prepared to consider "a different program for every child" in this hard-to-reach group, even though most people would expect their doctors to treat them as individuals, and most teachers of writing, art, and drama would plan for individual creativity to thrive. Such respect for individual learning also applies to seemingly low achievers when the foundation of later learning is being laid down.

Literacy, defined here as performance in reading and writing, could be likened to an individual sport like

* The Auckland College of Education has hosted the Reading Recovery National Centre in New Zealand for many years now, and the National Trainer-Co-ordinators have trained Australian, British, Canadian, and some United States trainers and tutors to lead programs back home. Many New Zealand tutors and trainers have by now served overseas to our benefit as well as to the benefit of their host country and such exchanges will be of value as new theories and future circumstances bring continuing adjustments.

golf or swimming; a personal coach can teach to the strengths of an individual, go around his weaknesses, and gradually lift the challenge. Reading Recovery designs individual solutions, from its theory and research to its delivery and daily instruction, and results appear in a relatively short period of time! A mother, having just consented to her child joining the program, said, "I doubt that they can do it in such a short time but I'll keep an open mind. It ought to take longer," than about 12–20 weeks to get to average levels of the class.

One-to-one teaching is not merely a convenient or privileged delivery tactic; it is the only delivery system that could arise from a theory which says that the causes of the difficulties are multiple, they differ from child to child, and each child has a different profile of strengths. This is heretical in an academic world that spends much energy searching for one explanation for reading difficulties: Therefore RR's approach stands somewhat in isolation. Many who admit it works still do not accept our explanations of why it works, and the practice will not survive unless its supporting theories are understood. Our challenge is simple: We have to enable children who are hard-to-teach to read and write in ways that make it possible for them to learn in class without any further special help.

Reading Recovery can have three positive outcomes, which create a win-win-win situation:

1. We aim to get about 90% (of those who enter) to work independently in the average group of their classrooms without further extra help.
2. Some children need to complete this treatment in the

next school year because they entered too late in the year to have a full program.

3. We provide diagnostic teaching which identifies about 1% of the age group (or up to about 10% of the intake group) for referral for a specialist report and appropriate longer-term help, after their time in Reading Recovery.

These outcomes are replicated by individual cases daily, in New Zealand probably 40–50 children complete their program each school day and in the United States RR may be completing programs at the rate of 500 children per school day.

The lowest-achieving children in the 6-year-old group are selected not excluding any child for any reason in an ordinary classroom, a challenging position adopted to ensure reliability of teacher judgment. It also takes care of other values like children's rights, fairness and equality, and social, cultural, and linguistic inequities (Sylva & Hurry, 1995).

Most children are flexible learners and can learn in classrooms with very different reading programs. Reading Recovery switches from group instruction to the child's own competencies and provides a second chance to learn literacy for those who make a struggling beginning. However, at the end of an individual program a child must have regained the flexibility required to work with any classroom program.

In time, RR gets "good press" for surprisingly good results in different countries and finds its way into important documents at country level. In England press comment moved from 3-inch-high headlines

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in the *Sunday Times* claiming, "This Program Fails" in February 1992, to part of a main editorial in the *Independent* in February 1995, which read:

...To most people outside educational politics it (Reading Recovery) sounds like a simple idea. Six-year-olds who are lagging behind in their reading are given half-an hour of individual tuition every school day for 16 weeks by a highly trained teacher... Expensive? Of course. But the cost for each child is less than the cost of administration alone for a child who requires 'a statement' for special needs...

By 1995 an independent academic research appraisal funded by politicians had reported the success of children in some tough urban settings in England (Sylva & Hurry, 1995).

The idea is simple but the program is complex; it calls for shifts in the thinking of those who train to be RR teachers; and it is hard for research-



ers and evaluators to understand a program which breaks with so many established parameters. This program aims to get rid of literacy difficulties, to accept an hypothesis of multiple causation, and has a theory to explain why it succeeds even when it flies in the face of much experience and established practice.

Reading Recovery professionals have to solve problems about children's learning, about teachers' learning, and about making the program work in education systems, which I graph as three concentric circles. Trainers and tutors train to become specialists in these three areas of problem solving.

A Personal View of History

My contacts with reading difficulties date from the 1940s when I entered teachers college and university and set out to complete a case study of one child. I was on teaching practice in a class of 11-year-olds and selected a child having difficulty with reading. I was given no framework for my study, no books to read, and no prescription of what to do and how to do it. I was required to give instructional help which I did, but as I have no memory of the outcome I wonder what either of us learned. My university courses about atypical children were heavily influenced by child psychologists in Britain like Burt and Schonell, and by Professor Ralph Winterbourn who developed the psychological service for the New Zealand Department of Education and the counseling service for New Zealand secondary schools. I was appointed to teach a special class for mildly mentally retarded children, which was Winterbourn's special area at that time. I taught most of

them to read with some success, was surprised at their progress, and wrote a paper about it. The literature review discussed the work of Monroe, Fernald, Gates, Burt, Schonell, and Helen M. Robinson, most of whom referred to in some limited way to spelling and writing as well as reading. Winterbourn trained two reading specialists, Ruth Trevor who established reading clinics in New Zealand over the next 20 years, and Yvonne Malcolm, known especially for bringing the International Reading Association to New Zealand.

My plans in 1949 to study with Schonell in Britain were thwarted by his move to the University of Queensland, Australia, and I went instead to the University of Minnesota and studied with Guy Bond (a student of Arthur Gates, whose "Improvement of Reading" is still on my bookshelf). Under Bond's supervision, I taught children with reading difficulties in my minor courses, completing my major in developmental child psychology. The courses I had planned to take in special education no longer existed, so I talked my way into the Institute of Child Welfare, and studied research on children and clinical child psychology. For personal interest I took "Theater for Children" in 1951 and still have my production script for a Chinese play with full stage design and costumes for three dragons, an interest never allowed to flourish.

The concepts of brain damage, brain dysfunction, and learning disability were on the rise; Strauss and Lehtinen had published two challenging books, and Sam Kirk was in Chicago beginning his work in this area. Clinics were seen as the answer to severe reading difficulties from

1950–70 and psychological tests for assessment included the Illinois Test of Psycholinguistic Abilities and the Frostig Test of Visual Perception, new instruments designed to produce definite diagnoses leading to prescriptions for instruction. With them came countermovements, weak by comparison, but destined to oust the clinical, diagnostic test approach in due course (Wiederholt, 1977).

While at home with my own preschool children in the 1950s I taught remedial reading at my kitchen table overlooking the Rangitoto channel and particularly remember two interesting 11-year-old boys. After a slow start each made alarming progress, alarming because it was unexplainable by existing theories about learning to read. It is food for thought when one's theories do not explain one's successes!

Schonell's research from Australia was widely read in the British Commonwealth. Canada had a strong group of academics leading clinical and classroom programs, and the research of people like Daniels and Diack (1956) was influencing approaches to reading problems in the United Kingdom. Led by medical advocates, the concept of dyslexia and the teaching programs it spawned spread across the globe in this period.

At this time in New Zealand the Chief Inspector of Primary Schools, Brian Pinder, concluded that the existence of reading clinics diminished the responsibility of classroom teachers for literacy instruction and defined every teacher as a teacher of reading, which was, perhaps the origin of the sound and pervasive literacy teaching of classroom teachers in the New Zealand Primary School today.



Marie's quest to explain the unexplainable progress of children with reading difficulties began in the 1940s when she entered teacher college and university and set out to complete a case study of one child.

By the mid-1970s the critique of the special psychological tests gained ground, followed in the 1980s by the sociologists' strident attack on the concept of learning disability and how it was being overgeneralized to populations to whom it probably did not apply. Psychological publications stressed that the numbers of people being labeled as having difficulties increased, but programs did not demonstrate a reduction in the size of the problem (Gittleman, 1985).

I published my first critique of the learning disability concept in Clay, 1972, and I was ready to put the brake hard down on the overgeneralization of legitimate conditions to children who did not need the labels. I began what I describe as my long and lonely swim against the accepted tide of theory and practice. In Clay, 1987, I published a stronger statement called "Learning to be Learning Disabled" presenting arguments about the definition problem, the diagnostic tools, and the failure

of this path of research to provide programs which reduced the size of the problem. Reports appeared showing that increasing numbers of people were being labeled in this way. Bluntly, I wanted to remove as many of these potentially learning disabled children from that category as I could. Today RR's challenge to teachers in the first year of school is, "Take as many of the potential Reading Recovery children away from Reading Recovery as you can by teaching them well" and the appeal to psychologists and administrators is, "Give as many children as need it a second chance at literacy learning before you categorize or label them as special kinds of learners."

A growing disenchantment with learning disability gave way to a new popular diagnosis of attention deficit disorder (ADD) with questioning articles now appearing in major psychological journals.

Country by country

Briefly, what was happening in the countries where RR is now being tried out? (See Pinnell, this volume, pp. 638–654 for the situation in the United States.) New Zealand had high expectations from classroom teachers, and a diminishing number of reading clinics. The education system never adopted learning disability or dyslexia concepts but instead appointed Reading Resource teachers to provide itinerant assistance to children with reading difficulties. These teachers supported and supplemented the classroom teachers' work. A voice for learning disability was maintained by the Specific Learning Disability (SPELD) organization of parents and interested public, who brought authorities from dyslexia or learning disability programs in the United

States, Britain and Australia to annual conferences in New Zealand.

In Australia the position was similar with greater diversity from state to state, a stronger learning disability movement, and exploration of new teaching strategies at different sites by people like Kemp, Elkins, and members of the staff of Macquarie University. A strong countermovement toward improving classroom teaching grew up with an emphasis on books, language, messages, and writing, an example of a defiant call encountered in several countries that quality classroom teaching was the way to reduce and eliminate reading difficulties. In part they were right.

In Canada the movement to improve classroom teaching was supported by authorities in the reading field like Robertson, Jenkinson, Downing, and innovative academics at the Ontario Institute for Educational Studies like Smith, Wallach, Wells, and Olson, with support from visiting British authorities on literature and writing like Meek, Britton, and Wilkinson. In each province there was strong clinical leadership from many people like Grace Walby in Manitoba.

In England opposing theories flourished side by side. Dyslexia still has a strong hold today in the treatment of reading difficulties, drawing new energy from research in neurological science. Research from Oxford and Cambridge by Bryant, Bradley, and Goswami led many to design programs on a most-important-single-variable assumption that reading difficulties would be overcome by increasing phonemic awareness. This nudged a long-overdue revision of unsound practices in the teaching of “phonics” as if English had a regular

orthography. On the other hand the ideas of those with a literary theory of learning to read encouraged a faith in children’s ability to learn if they were read to, from good trade storybooks, a move which became linked with a goal of working with each child individually until she or he became a reader and writer. This confused the essential need for “individual teaching for some” with the difficulty of delivering it effectively to all. Most children do not need it; some do. For some people psychological theories and psychologists were seen as the problem, perhaps the cause, behind reading difficulties. Therefore an admirable advocacy for reading stories which was needed in classroom programs became confused with the need of some learners to get extra and special help. Good classroom teaching will never suit every learner and something extra should be available for some.

The combined effects of teaching practices, theories, academic endeavour, and public and political awareness lead countries to travel along different paths in evolving improved literacy programs. Some cross-fertilization of ideas is accompanied by serious doubts that what works in one place could work in another, but there have been strong movements driven by the assumptions of teachers and teacher educators, each emphasizing their own “significant variables” for primary school literacy learning. Notable is the doggedness with which Australia, New Zealand, and Canada, while strongly influenced by British and American practices and publications, have striven for the local integrity of what they do, evolving programs which do not mimic the perplexing diversity of practices in

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England, or the polarity and pendulum swings of change that occur in the United States.

Reading Recovery’s History

In New Zealand

It was 25 years after my time in Minnesota before I began on RR. I taught developmental psychology and clinical child psychology for 30 years to educators and educational psychologists, and carried out a variety of research projects, some directed toward early literacy. I became involved with the International Reading Association in Auckland, and was elected president of this Association 30 years later in 1992–93. My connections with the United States were rewarding because I learned a lot about my own country during my stay there, and about cultural differences, and how to switch from culture to culture. This prepared me in small ways for my recent challenges.

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recording. We discarded what did not work, related what worked to existing theoretical writing, enlarged the team in 1977 to seven, continued the sifting process, wrote a teachers' manual and felt that we had "something that worked." We got permission to carry out field trials in schools with five teachers paid by the National Department of Education. We selected schools in average to poor areas, varying in size and in organization, avoiding the advantaged districts. Principals released their best teachers for the job and we began the development of our several levels of training for RR professionals.

By the end of 1977, we had a well-documented miracle full of surprises. The research design had been carefully selected not in ignorance of traditional research designs but to answer the relevant questions at that point in time. Five issues were considered.

1. The questions were: "What was possible for the lowest achievers? What percentage could learn to read? Could any children reach average levels for class? And if so what percentage could reach such levels?" The theoretical question was "Could we take children who were falling further and further behind their age/class peers and teach them to do what competent children were learning to do" as described by Clay (1966, 1972)?
2. No competing programs existed. Therefore, research designs comparing programs (such as a quasi-experimental design with randomized groups) would only answer the question, "Was it better

than an alternative program?" We needed to ask, "How do the outcomes compare (a) with the individual's past record of progress?" and (b) "Where were individuals in relation to the class group?" Such questions continue to be critical in evaluations of RR.

3. At that time the experimental designs were not recommended as appropriate for an extreme tail-end segment of the total population.
4. Success could not be judged by standardized tests in New Zealand at the time of the initial research (a) because none were available for the age group and (b) because RR is directed toward schools managing their own programs in the interests of their local population and not necessarily matching national norms. All the other children in the same classes, that is, all the better performers, create the school-based relative standard for entry and outcome against which the program's effectiveness in practice was judged.
5. Statistical analyses of changes across groups would be mere approximations of success which could not guide the clinical treatments of individuals, so real-world differences recorded as data for individual cases were essential.

In this first study we were also investigating the way the program might

work in schools and we deliberately placed as few organizational constraints as possible on the RR teachers' decisions; we asked them to tell us how to make the program work in schools of different sizes and populations.

The results of every child who entered the program, not excluding anyone, were published in the manual for teachers (Clay, 1979, pp. 74–79) contrary to misreporting in many reviews. Three group results were reported—Discontinued from the program, Not Discontinued, and the Comparison group for age/class peers in the same school. The Not Discontinued group included the seven children who were referred to psychologists (reported in Clay, 1979, p. 80), the children who had short, incomplete programs which were continued in the next year, and four children who left the schools before their programs were completed. Thus the tables account for all children in the study. In a later study Clay and Tuck (1993b), showed that "carried over" children took the same time and had the same discontinuing rates as children who completed their programs within the school year.

The first research design apparently addressed administrators' questions about children's progress and demonstrated that they could have discontinued children in high numbers, with low numbers of referrable children, and that children who entered late in the school year would need to complete their programs in the subsequent year. Within a month the director-general of education called for a seminar to discuss the report's implications for the development and expansion of the program across the country. Where was this surpris-



ing solution which defied traditional parameters supposed to go? The notes I prepared for that seminar were pretty much on target for the next 10 years. I missed some of the problems but I had a pretty good view of what could happen in our small country, and anything beyond these shores was not to be dreamed of.

The snowball began to roll. One hundred teachers were trained in Auckland in 1979–80, the program began a slow expansion through New Zealand with national implementation across the country during 1983–88 (Clay, 1990) and the analysis set the model for an economical, national monitoring system based, not on a sample, but on the total population served and discontinuing rates (Kerslake, 1993). From a birth cohort of 50,000 6-year-olds in 1994, a prevention program was provided for 14,500 each year, about 9,000 of them became independent readers and writers, 3,400 were identified for completion of their lessons in the following school year, and 1,043 were referred for specialist reports (Kerslake, 1993). The efficiency of this implementation has had a good press (Frater & Staniland, 1994).

The emigration of Reading Recovery

In 1983 came the challenge to transfer RR first to Victoria, Australia, and 18 months later to Columbus, Ohio. Could what worked in New Zealand be replicated in another country? Education is usually not considered to be exportable, as education systems are organized and managed differently with different political agendas and a superior result from a program on home ground did not justify the optimism about replication in another education system. Thirty years after my experiences in Minnesota

I was still deeply impressed with how different education is in different countries.

My talk on RR at the Darwin Reading Conference of the Australian Reading Association triggered developments in Victoria and Canberra. A Bendigo administrator, Peter Hunt, thought RR worth trialing. Joan Smith trained in Auckland, returning to Bendigo in 1984 with Jeanette Methven, a New Zealand tutor. Hints that this program would only work under the close guidance of Marie Clay had to be laid to rest, and I did not visit Victoria until the end of the year, leaving guidance of the development to the Director of Reading Recovery in New Zealand, Barbara Watson. Peter Geekie (1992) with Brian Cambourne studied the initial year of the program in Bendigo from the point of view of how teachers, school staff, parents, and the community saw the program.

In sequence three trial training programs for tutors were initiated, in Victoria at the Bendigo College of Advanced Education, at La Trobe University, and at Melbourne University. Victoria did not train a RR trainer until 1994, but in some years tutors were sent to the Auckland College of Education for training. Parallel developments occurred in the Catholic schools, and in other Australian states — sometimes the lead has been taken by Catholic education and sometimes by the state system.

The Canberra system sent two tutors to New Zealand for training in 1986, and has run a system-wide implementation for 8 years in almost all its schools but only serving about 13% of its hard-to-teach children. This is called partial implementation when a

school does not deliver the program to all who need it, and this leads to a questioning of the program if the problems are not cleared by expansion of the coverage. Another early stronghold was established in Wagga Wagga. The New South Wales program began to expand in the late 1980s with help from the New Zealand national trainer, and tutors on leave from New Zealand served both the State and Catholic education systems. Queensland now has an expanding program and Australia now has three RR trainers.

Australia made a unique contribution to RR by having a member speaking in the Federal Parliament sufficiently well-briefed by an alert tutor to have a description of the program entered into Hansard, the parliamentary record. Representations were also made to a Federal Parliamentary Commission which recommended two literacy programs, Reading Recovery and First Steps, and suggested that states might select one or the other! This was strange since if First Steps were to be directed to classrooms RR would still be useful as a backup supplementary program for those with literacy learning difficulties.

Note that early initiatives by educators came to the notice of state and national administrators by first making the program work in schools rather than by academic argument or espousal. This was probably the only possibility since the program turns its back on so much past thinking and practice.

From the early Australian experience we learned to adjust to some education system differences: different policies for entry to school, use of the first year of school as a preparatory

program in contrast to the expectation that 5-year-olds would learn to read and write, variation of curriculum and materials with nothing like the many little story books in New Zealand classrooms, and concern that the program's assessment tasks for selection and progress checks might perform differently on "new soil."

In the United States and Australia we faced the challenge of getting teachers to teach differently, to use a theory predicated on the constructive child, and to hold complex variables in mind when making teaching decisions at all times. The insistence that the teacher should be very observant of the learner's behavior made some Australian teachers uncomfortable, as if this were an intrusion on privacy to peer into and discuss the detail of a child's response, but being observant has become accepted as essential in a program that helps children proceed along idiosyncratic paths.

By May 1984, colleagues in the United States were asking how to prepare for a September start when we had only just begun in Victoria. (The extensive research from the United States is reviewed in this volume by Pinnell, pp. 638–654.) In the United States the program faced a new variable, the existence of established provisions for children with reading difficulties at this age level. There were "reading teachers," and federally funded programs for socially disadvantaged children, and programs for the "learning disabled," and a common practice of schools to employ paraprofessionals to work with children needing "extra help." Reading Recovery had to compete for the same pool of resources, and for the children to be served. The conflict emerged early in Ohio in

one district with a strong skills-based program for children with literacy difficulties. Reading Recovery was criticized for not delivering success to every child, and the existing program claimed superior results.

In 1995 in the United States, "Over the last 10 years in 1,905 school districts and 5,523 schools Reading Recovery has accomplished what it was designed to do. A total of 88,323 individuals have...caught up to their grade-level peers..." (Pinnell, Lyons, & Jones, 1995). The program contin-

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ues to expand and has a place in current discussions in the United States about special services in least restrictive environments for special needs children (Lyons, 1994, 1995).

Canada, benefiting from the proximity of Ohio State University, had tutors trained for British Columbia, Manitoba, Newfoundland, Nova Scotia, and Scarborough, Ontario, which led to the creation of a Canadian National Training Institute in 1993, backed by sterling efforts from administrators. Canada had three trainers by 1996. The Canadian Royal Commission on Learning recently reported to the minister of education and training, with recommendation 33 being:

That no child who shows difficulty or who lags behind peers in learning to read be labelled

"learning disabled" unless and until he or she has received intensive individual assistance in learning to read, which had not resulted in improved academic performance. (1994)

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England's interest began later in 1989, starting in Surrey after several talks given in England between 1981 and 1989. Surrey found funds to train a tutor in New Zealand, who returned to set up a successful local implementation model backed by strong administrators in tough economic times (Wright, 1992). A training for tutors began in the UK in 1991, and over 2 years nine New Zealand Reading Recovery personnel helped the Institute of Education, University of London to mount training programs for teachers and tutors for geographically spread sites in boroughs and counties. The Institute trained further tutors in 1993–94, and completed 3 pilot years with temporary support from the central government. The HMI report on the New Zealand program was an independent document of importance to developments in England and the program found its place in the National Commission on Education report "Learning to Succeed." Northern Ireland and Jersey have new programs and the first class of teachers for Wales have trained for English-medium schools. The government also commissioned an independent study (Sylva & Hurry, 1995).

On my computer I have copies of most of the United Kingdom press

reports which have on the whole made our task difficult, but with the publication of the research commissioned by the government, RR's press in England has become positive. It took 3 years.

Politics in the United Kingdom induced a twist into the implementation of this program. It was delivered mostly to inner city schools recording the lowest scores, where many

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children had free lunches. Together politicians, economic issues, and the predominant message of the press over 4 years pushed out of sight the fact that as almost every school has its children who have difficulties, almost every school requires a make-up program. *Resourcing should not be linked to poverty*; it should be based on learning need and all schools should have access according to demonstrated best learning needs, not socioeconomic need. The English counties like Surrey and Cheshire which have introduced Reading Recovery without

government assistance will be free to demonstrate what the program can do for young children's literacy difficulties. The lowest achievers in any school, in any sector of society, need access to this supplementary program.

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The cutting edge of the research for RR is delivery in Spanish for Hispanic children in various parts of the United States, and interest has been shown for other language adaptations, such as French for Canada. It is not possible to deliver this program immediately in another language as redevelopment is required to suit the characteristics of that language, and this involves much more than mere translation and takes about 3 years of trials. The Spanish experience has demonstrated that redevelopment takes times and must be done with care. But it is interesting because we can expect to get another level of understanding about the reading process across languages. Full translations into Spanish of the teachers' manuals are a current development and would open the doors to trials in Mexico, Central and South America led by bilingual tutors from the United States. Rather belatedly I have come to understand what we are struggling with in trying to make this program work in different countries. I think of each country, or state, or province as a young river, on a course of development that is undergoing changes of a complex kind, and our early inter-

vention is like a standard boat tossed into several different turbulent rivers and struggling to master the rapids and stay afloat in each of them. The central tenets of teaching on this program, "tentativeness, flexibility and problem solving" are necessary.

Three Concentric Circles: Implementing, Teaching and Learning

Evaluation studies of new educational developments do not necessarily arise from a theoretical hypothesis. Discovering what was workable in RR led to the construction of a theory to explain this, the reverse of most academic inquiry. On the one hand teachers had children they could not teach, and on the other, educational psychologists had too many referrals and few effective treatments for the hard-to-teach literacy problems. I worked with a team to find a research-based solution to these problems. The program was constructed by a problem-solving approach to an unstructured problem (although Robinson's (1993) authoritative work in this area is critical of the path we took). Theory did not drive practice; rather there was a circle of influence from practice to theory, and back to practice, informed and altered by data from day-by-day documentation of changes in children and an imperative that it must be workable in schools. No particular school of thought on literacy learning drove the exploration, but new work at the time included Bruner (1957, 1973), Cazden (1972), Chomsky (1972), Donaldson (1978), Graves (1978), Miller (1967), Read (1975), Smith (1971), the Russian school of development psychologists, and information processing psychologists like Rumelhart (1994).

A typical research review assumes that theory comes first, and is subsequently applied to practice, and we gamble on whether teachers and education systems can work from the theoretical account. I recommend that a critique of RR should reverse the cycle, start with the outer circle and ask: (1) Can this education system put the program in place? and (2) Can teachers be trained to teach children and achieve change? before asking the question from the inner circle, (3) What theoretical assumptions do the data on children's learning support or challenge? Critiques usually try to answer question (3) but this is only relevant if the first two questions can be answered affirmatively. Readers of reviews should first be assured that the conditions in questions (1) and (2) have been met. Therefore, I will comment with this approach in mind.

The Outer Circle: Working in School Systems

At what age should RR be available? The general statement would be that selection should occur as soon after entry to school as we can reliably identify children falling behind their same-age peers in the new classroom, and the timing has to be problem solved in each education system. In New Zealand it is after 1 year of school (i.e., around the sixth birthday), after a fair chance to settle in the school, to adjust to demands, and to begin to learn. Two reasons for this timing are that (1) review of research reiterate that we cannot predict literacy problems well enough before instruction begins, and (2) a "multiple causation" theory includes lack of learning opportunities in life or school contexts as well as prob-

lematic learning histories, and does not relate only to a child's potential for learning. Reliable prediction of which individuals will fail or succeed is not achieved before the onset of instruction.

Across the world further questions are raised. Should entry be earlier in places in the United Kingdom where the school entrant could enter school at just over 4 years of age or do we wait until after 7 years for the child who begins schooling at 6 years? What could be recommended for countries which begin school at 7 years? In the United States does the kindergarten count as school and what about half-day kindergarten?

Age of entry is an example of how implementation of the program must be problem solved in every country because of differences in societies, in populations, and in education systems, as well as politics, economic theories, social problems, and religions. On the other hand a country's theories of child development and learning, of literacy learning, and of early intervention must also be taken into account. Surprisingly, about 6 years is a practical compromise and we have enough experience on the ground to show that this works. The factors to be weighed are age, time at school, general preparedness, and some things about child development. We had to have learners with two qualities: first, what they knew had to be woven into a fabric of interacting response systems which they controlled (for islands of knowledge about specific aspects of literacy processing would not make an effective reader or writer) and second, the learners had to become relatively independent of teachers so that they could work well in classrooms.

The negative consequence of starting too early is giving individual teaching that would not have been needed if we had waited longer, and the negative results of waiting too long are that the time it takes to deliver an effective program lengthens the longer the children have been in formal instruction, and therefore fewer children can be served for the same teaching resource.

Absence of teacher or learner from daily lessons

This threatens the accelerative learning needed for children to catch up with their classmates. The difficulty of getting children to school every day requires attention, but getting parental permission for the child to join the program offers an opportunity to negotiate for special help from the family to have the child at school. After several research studies the variable "teacher not available to teach" emerged as a bigger problem than child absence. Despite excellent reasons why the trained teacher should perform other duties in school or in society, it is absolutely necessary for the RR children to receive a lesson a day. This frequent contact allows yesterday's responding to be still clear in the minds of both teacher and child. For schools this means release of an effective teacher for 2 hours a day (varied according to training status and the school's need) and without pulling that person off their allotted task. The potential for accelerated learning is reduced if the teacher is not available to teach daily. The lessons must occur in an intensive series and the same number of lessons spaced out over time is a poor substitute resulting in poorer learning.



The length of the school year

This determines how many days the teacher has to teach. Different models for three or four terms, and all-year-round schools can create difficulties with the “a lesson every day” demand.

The learning needs of individual children do not align with the school year of teaching. In New Zealand schools it was easy to continue to teach the children who were not yet ready to leave RR in the next school year, until they reached one of two outcomes, discontinued or referred. (Teacher leaders in the United States and Canada are called tutors of teachers in New Zealand, Australia, and the United Kingdom.) An incomplete series of lessons occurs only when a child leaves the school and attends a new school which does not provide RR assistance, a very rare occurrence in New Zealand. In some other countries like the United States with a shorter school year and different promotion practices it is often unworkable to continue RR help in the next school year, but solutions to this problem are being formulated.

How long does this supplementary program take?

The time in the program is surprisingly brief. With consistency across the world the time in an efficient program averages from 12 to 20 weeks thus providing a guideline within which to shape our expectancies and policies. The fact that individuals spend different lengths of time in the program is irritating for researchers and administrators; they would like a fixed number of treatments for all, a prescribed turnover point, “all change here,” but the discontinuing criteria require a teacher to ensure, as best as she can, that a child is now

sufficiently independent to survive in the classroom without further help. Reviewers also find it difficult to understand the flexibility with which this program adapts to individual learners so that time in the program was reported as 15 weeks for research convenience in one study (Center, Wheldall, Freeman, Outhred, & McNaught, 1995) and 20–26 weeks in another (Sylvia & Hurry, 1995). Unfortunately figures in reviews can become the reference for new research or implementations. The capacity of the program to adapt in length to the learning needs of individuals is critical to (a) learning and (b) effective implementation.

Discontinuing rates across different countries

Comparisons of the rate at which children leave this program at average levels of performance can be made within an education system but must be handled cautiously across countries. It is now clear that they depend on program delivery factors such as the average number of children passing through a half-hour teaching slot in the year, the length of the school year, and whether daily lessons are delivered. If the question is, “What percentage of the intake group will be discontinued?” then in the real world the following statistics apply.

No. of children a teacher serves a year in a 30-min teaching slot	No. of children with a full programme	Possible Discontinuing Rate
1	1	100%
2	1	50%
2	2	100%
3	2	67%

In each 30-minute teaching ‘slot’ New Zealand teachers tend to get

two children out of the program and take a third child in, to be continued in the next school year. This is considered “best practice” and results in about 67% discontinued per calendar year! The Ministry of Education Research Division’s annual figures published and available on request show, that in New Zealand 0.2–1.5% of the age cohort is referred for longer-term assistance in a calendar year (Clay, 1993b, p. 84).

This sampling of some of the implementation issues illustrates why a sound approach to evaluating the children’s learning would be to start an evaluation by satisfying oneself and one’s readers that the implementation of the RR program to be studied was an effective one.

The Second Circle: Training Teachers for Problem Solving

The training course for RR teachers is a year-long period of change. Change during that year is a unit of learning in itself. Geekie (1992) reported a shift over a year from widespread skepticism to obvious commitment among RR teachers and among schools. Teaching improves after training and more children are discontinued in less time. Research reports need to record how long a program has been in place together with details of teaching experience beyond training.

In all countries teachers bring to their teaching assumptions which are sometimes country-specific and sometimes more general. Such assumptions call for small adjustments in training courses in each country, but because RR must not limit the progress of any child by its practices and policies, all teachers are required to open up

their local clusters of assumptions to new alternatives.

1. Some assumptions are about *curriculum sequences* that should occur, including inflexible beliefs that a child must know (A) before she or he can try to do (B)! Assumptions like this underpin programs which teach a letter a day for a whole year in some kindergartens, or require children to know all letter-sound relationships before they try to read, or insist that children read before they try to write.
2. Some assumptions are about *task difficulty* and the *assumed limitations for learning that children have*. There are assumptions about “*hard things*” that must be left until later (such as comprehension), or “*things that must come first,*” or “*things that will require many repetitions.*” Teachers think, “It will be hard and I will have to help you,” or “I will have to simplify it for you,” or “I will have to instruct you until you can learn for yourself.” A RR teacher must invite learners to deal with *complex texts*, to *learn at a faster rate than average*, and to become independent learners who initiate, process, monitor, and self-correct, expanding their own literacy processing system while reading and writing independently.

These assumptions of curriculum sequence or teaching sequence are inappropriate in RR; they are assumptions

devised for group instruction, and are not suited to individual learning, looking for a fast track to success and taking different paths to common outcomes. To accelerate the progress of a child with a low repertoire a teacher must find any route to the desired outcome and allow for the entire range of idiosyncratic competencies to support the struggling learner. A teacher must monitor her own assumptions about learning and about an individual child to take advantage of every incipient opportunity to “leap forward.”

3. On the other hand there are sets of assumptions which limit progress because they take for granted that all competencies needed for literacy behaviors will emerge in some natural way when the learner is ready, causing a teacher to wait for these emerging competencies to reveal themselves. Some teachers do not want to govern the amount of challenge in a reading text, nor consider a gradient of difficulty, nor think about how a new competency can be helped to emerge from what is already known. This is not the place to debate this matter in relation to classroom learning but these things are not true for those learners who, by definition and selection, are finding learning extremely difficult.

The challenges in training teachers lie in uncovering hidden assumptions

made by teachers in each country that are antagonistic to the progress of hard-to-teach children. We need them to become more flexible and tentative, to observe constantly and alter their assumptions in line with what they record as the children work. They need to challenge their own thinking continually. Such change begins during their training year, but teachers discontinue more children in the next 2 years as they become familiar with the program and how it can work. They learn to use the rationales for decision making which make the teaching and the organization of the program run more effectively. Due to the complexity of what is being learned, the individual learning trajectories of the children and the incomplete theory out of which teachers work, there will always be problems to solve. Teachers need to recognize that they start with diverse assumptions about learning to read and write and these differences are a strength within their collegial network.

In different countries there have been differing degrees of willingness to consult peers, and for tutors or trainers to form networks, to seek a second opinion, and to overcome the unreliability of one person’s decision by pooling knowledge in network decision making. Such consultation is self-correction behavior aimed at catching the errors in individual judgments; it is essential.

Sometimes the emphasis during training in sessions behind the one-way screen is on putting what you see into words, but equally important is the articulation of how what you see conflicts with what you had assumed. Bringing the implicit, whether observed or assumed, into a verbal form which allows discussion and

revision is an essential part of training in each country. As a college of education dean said to his peers,

Reading Recovery has managed to operationalize that vague notion that teachers ought to reflect on their own practice. That behind the glass play by play analysis and the collegial debriefing with the teacher after her teaching session represent some of the best teacher education I have witnessed in my 28-year history in the field. (Pearson, 1994)

The Inner Circle: The Learning of the Children

Children's learning has not shown clear differences across countries, except for those created by different classroom programs (i.e., different learning opportunities) or associated with age. Culture and language have created interesting questions but no big problems.

Independent reviewers from the United States and the United Kingdom, who are not involved in devising or delivering RR, provide the following characterizations of the program's background theory. Both reviews say that Clay (1979) describes reading as "a message-gaining, problem-solving activity which increases in power and flexibility the more that it is practiced." Wasik and Slavin (1993) list the components of the reading model as perceptual analysis, knowledge of print conventions, decoding, oral language proficiency, prior knowledge, inference making, reading strategies, metacognition, and error detection and correction strategies. They omit "visual" from perceptual analysis, translate phonemic awareness into decoding, and create an unexplained metacognition com-

ponent, all of which are imprecise and could mislead. They select three major theoretical principles for mention: (1) that reading is considered a strategic process that requires the integrating of letter-sound relationships, features of print, and language which is derived from the interaction of the reader's unique background and the print; (2) reading and writing are interconnected and the child must make the connections; and (3) children learn to read by reading and only by reading frequently can the child come to detect regularities and

Children's learning has not shown clear differences across countries, except for those created by different classroom programs (i.e., different learning opportunities) or associated with age. Culture and language have created interesting questions but no big problems.

redundancies present in written language. I would not quarrel with the words used above or with the following. "There is no systematic presentation of phonics yet during the reading and writing activities letter-sound relationships are taught as one of the basic strategies for solving problems" (p. 183).

Sylva and Hurry (1995) reiterate the message-getting problem-solving activity quoted above and add that children make use of a variety of strategies to help them in this problem-solving activity, the most central of which are: (1) their understanding of the concepts of print, (2) their

phonological awareness of sounds in words and letters and letter strings on the page, (3) their understanding of the meaning of the text, and (4) their knowledge of syntax. "Meaning is not derived from the print alone but also from the knowledge of the world that readers bring to the task, for example, their knowledge of the language of books and language in general, their prior knowledge of the subject matter of the text, their ability to make inferences." The goal of RR is to help children to use all the skills and strategies that they have at their disposal (and to) "encourage children to monitor their own reading, detecting and correcting errors by checking responses against all possible strategies." This improves children's reading and writing "over a wide range of skills," described as a broad spectrum approach.

Against that reporting one can set less-accurate accounts of RR's theory given by Center et al. (1995), Hiebert (1994), Iversen and Tunmer (1993), Razinski (1995), Shanahan & Barr (1995). Center et al., for example, report the theory in this way: "Reading is viewed as a psycholinguistic process in which the reader constructs meaning from print," and most readers would then place it in the wrong theoretical camp with psycholinguistics rather than information processing.

Variants within the learning theory
To be an effective program RR must be responsive to the discourse of new research and theory and not be locked into the theory of the late 1970s when it was developed (Pearson, 1994). In the early 1970s its practices may have appeared ahead of research in some areas, but as more information and new theory becomes available, areas of uncertainty should

be informed and practices should change. Three examples illustrate past or potential changes:

1. Recent research on phonemic awareness called for little change in actual procedures because in 1976–77 we observed that children who had extreme difficulty with “hearing sounds in words” needed effective teaching which was built into the program from the beginning, an example of practice ahead of theory. New information confirmed that practice; it changed what teachers read during training, and it led to an increase in emphasis on the reciprocity of reading and writing (see Wasik & Slavin, 1993).
2. In one area of uncertainty we still search for a stronger theoretical basis for how the child weaves visual perception learning into his early construction of inner control over literacy and recent eye movement research inches us close to this possibility (Rayner & Pollatsek, 1989). The reader cannot use his phonemic awareness in the service of reading or writing without some new visual perception operations!
3. A thorough review of the arguments about onset and rime, and analogy clarified how children can develop effective procedures for handling three different categories of spelling clusters in English that are phonologically regular, orthographical-

ly regular, or irregular, with the same cognitive strategy. This allowed for better teaching in the “making and breaking” segment of the lesson (which existed in the first edition of the procedures manual) and without either a prescriptive teaching sequence or an undue stress upon regularity and word families that would be inappropriate for the English language.

The dynamically changing theory is concerned with how we understand the sequence of changes in ways in which children process complex arrays of information as they learn to read and write. A multivariate theory of such changes (rather than a single causal theory) forces an openness to new knowledge. If “Reading Recovery helps children to integrate a wide range of skills involved in reading and writing” (Sylva & Hurry, 1995) then there are a myriad of unknowns hidden in the verb “to integrate” when it is combined with a developmentalist’s interest in “change over time.” Much of it has to do with how and what the constructive learner learns from his own decision processes when problem solving continuous text. What is challenging for theory construction is that during the time of reading and writing acquisition each one of the multivariate processes is in a formative stage.

New editions of teachers’ text covering theory (Clay, 1991), assessments (Clay, 1993a), and teaching procedures (Clay, 1993b) are essential for a program that is evaluating and responding to shifts in available knowledge.

Variants from outside the program

When variants which are theoretically incompatible with the program are introduced into the program as research variables and good results reported, it is not acceptable merely to claim that the variant produced the good outcomes for it is plausible to suppose that the broad program may have sustained progress despite the variant. Hatcher (1994) for example, introduced a systematic, detailed and prescriptive phonological training into his recommended program and, unless we are shown otherwise, one might hypothesize that the wrap-around RR program carried the variant to its success.

Children with English as a second language

It has been reported that these children are, or should be, excluded from selection (Hiebert, 1994). This does not happen in the five countries where their progress has been watched. They are probably the group of children who derive most benefit in subsequent years from having had this supplement early because language was the major block to their learning and they had 30 minutes every day with a teacher who increased their time for talking and personalized their instruction. Hobsbaum’s study (1995) from England reported satisfactory progress for children who spoke more than one language.

Reading Recovery in another language

If special care is taken to redevelop the observation (assessment) tasks and the instructional procedures then the “window of opportunity” for an early intervention in literacy learning appears able to cross language barriers.

ers and remain effective. For children learning to read and write English, no important differences appear in what it is the children need to learn to do in different countries. However, since teaching began in Spanish (Escamilla, 1994) we have had to consider that there is more involved than theoretical concepts and assessment tasks. The timing in acquisition and the emphases during instruction for effective processing in another language might change. After an early discovery in studies of early writing that English-speaking children hear the consonants of the language easily and have problems with hearing the vowels and by contrast, Spanish-speaking children hear the vowels and miss out on the consonants at first, (Ferreiro & Teberosky, 1982) our current questions are about (a) the role of the syllable in Spanish literacy acquisition, (b) whether the linguistic discovery of onset and rime applies to Spanish, (c) how to help beginning readers cope with many long words in their first books, and (d) for languages with much more regular letter-sound relationships than English (Spanish, Maori, and German, for example) how might RR teachers tell whether the learner who has become a rapid decoder of regular phoneme-letter relationships is taking full account of meaning and language structure? These aspects of processing may be more readily observed in the oral reading of English than in more regular languages.

A possible neglect of writing

Progress in RR is measured in terms of both reading and writing progress and the child is expected to survive back in the classroom in both curriculum areas. A large body of research shows that readers and writers have to develop phonemic awareness, and

Progress in Reading Recovery is measured in terms of both reading and writing progress and the child is expected to survive back in the classroom in both curriculum areas. A large body of research shows that readers and writers have to develop phonemic awareness, and build the use of the sound system of their spoken dialect and language into their developing network of strategies for two similar but different processing systems, reading and writing.

build the use of the sound system of their spoken dialect and language into their developing network of strategies for two similar but different processing systems, reading and writing. Researchers who continue to separate reading and writing and their respective theories do not model the actual or potential links between these two activities, and reviewers tend to skip over the writing in RR and its contributions. If children can use their knowledge about reading and writing to support each other then these two activities have reciprocal effects on each other. Teachers with very different assumptions can retard the progress of children in reading when they skip the writing or give it minimal attention, assuming that they should and can give priority to reading and attend to writing as a later learning task.

Conclusions

A good review will be referred to when the original studies are forgotten; it summarizes the position to date and acts as a bulwark saving readers from the need to return to original sources. Reviewers therefore have a responsibility to understand and report previous research accurately before biasing the subsequent course of practice, research, and theory with their conclusions. Whether we like it or not Herber (1994) has shown that we do not usually review back more than 21 years, and it is 19 years since RR began its development and 16 years since the first reports were available. Already the decade of the 1970s is outside the reviewer's ken; therefore, while this is not the place for a meta-analysis of reviews it is important to stress that, internationally, accurate reviewing is very important and seldom achieved.

To take just one example, several reviews echo the claim that RR only used in-program tests and had no standardized test as a beyond-program measure (Center et al., 1995) but that problem was recognized from the beginning. Training sites have used local standardized instruments; the Burt test from NZCER in New Zealand; in the United States the most successful being the Woodcock Reading test; and in England the British Intelligence Scale (Reading), although this test is not available for use by teachers. Outside the United States some favor the Neale Reading Test but as it has four unconnected and not comparable standardizations at this time, a reader needs to be told clearly which editions and which norms are being reported.

In research studies across the world measurement instruments are added to the RR measures for several reasons: (1) to test alternative theories; (2) to measure outcomes on standardized measures which were designed usually with different theories in mind; (3) because new instruments become available; and (4) to allow for comparisons across populations and even countries. What the researcher, administrator, and teacher understand by the test labels will depend on the theory they are committed to, the implementation question they have in mind, or the practices they have experience with. One can “read” the phrase “a test of explicit phonics” in nine or ten different ways depending on one’s professional role (theorist, teacher, or administrator) and if there is no explicit specification of what is taught, how it is taught, and how it is embedded and used in the acts of reading and writing one is left to one’s own constructed interpretation. Is the achievement the memorizing of words (Sylva & Hurry, 1995), or a metacognitive awareness that makes sense of phenomena like down/blown or light/blue in English, or a set for diversity, or elaborate teaching sequences (Hatcher, 1994)? Could this be abstracted to the principle of knowing how to use analogy with the flexibility to say, “If it is not like this word I know then it might be like that one,” a simple tactic to achieve many complicated solutions (Clay, 1993b)?

One-to-one tutoring as reviewed by Allington (1994), Pikulski (1994), and Wasik and Slavin (1993), is a potentially effective means of preventing student reading failure. It deserves an important place in discussions of reform in preventive, compensatory, remedial, and special education

strategies. “If we know how to ensure that students will learn to read in the early grades, we have an ethical and perhaps legal responsibility to see that they do so. Preventive tutoring can be an alternative for providing a reliable means of abolishing illiteracy among young children who are at risk for school failure” (Wasik & Slavin, 1993, p. 158).

High rates of success for RR have encouraged a frequent error in education, the error of overextension of its potential and consequential misapplications. It would be unfortunate to lose the specialist solution because of this. No one claimed that RR would be an effective solution to anything but the learning problems of the lowest achievers in the second year of school; no one claimed it would improve the *mean scores* of the age cohort; no one claimed that it would

provide the answers to all literacy difficulties; no one claimed its theory to hold for all literacy learning.

Complex issues require specialist solutions. An educational treatment finely tuned to a particular challenge should not be expected to solve all literacy problems. Its success is captured in the Sylva and Hurry synopsis “...a powerful intervention over a broad spectrum in the short term, and for the most disadvantaged and the lowest achieving children... Reading Recovery was more powerful even one year after the end of the intervention for the disadvantaged children and it is highly effective (also) in changing the behaviours of those who fail to discontinue.” This demonstrates something more like “a change of status theory” of literacy acquisition, the child going through the door into the world of written



Clay’s observational methodology and clinical orientation arise from her training in developmental psychology and have kept her close to the source of literacy learning—the children and their teachers.



language rather than a theory which emphasizes a slow accumulation of knowledge, and that change of status might be considered a citizen's right. We want to know much more about how tutoring works and how to maximize its effectiveness (and minimize its cost).

The explorations of teacher training and support, the delivery of teaching, the management and the school, district and state/country level of the program demonstrate that any further research on RR should, for economy's sake, study the outcomes in learning only in places where it can be established that: (1) the teachers are in or beyond their second year of teaching after training and are part of the recommended support system offered by tutors/teacher leaders, and (2) the program is implemented according to state or national guidelines. The schools should follow the local guidelines for program delivery and the implementation should be in its fourth year. I am still inclined to the opinion that a follow-up study should follow the children over time together with the age/class group in their school for that is the valid comparison group against whom their entry and exit criteria are judged. Under the above conditions it would be good judgment to carry out a cost-effectiveness study.

With that approach in place and with any other qualifications appropriate for real-world research, academic researchers might be justified in using the changes in learning to shape and evaluate theoretical constructs about literacy learning.

Such choice conditions are unlikely for, as the then Dean of the College of Education, University of Illinois, David Pearson (1994) reported, he

One thing we have learned internationally. Children do not have to be slow learners. We have created and categorized slow-learning children by the ways in which we package and deliver our age-bound cohort structure for instruction. Reading Recovery set out to deliver learning opportunities differently.

sought with others for 2 years for financial and/or political support to conduct a substantive and effective cost-benefit analysis of RR to "alleviate the lingering doubts of sympathetic supporters and to disarm opponents," but without success. An alternative model used in the Rowe (1995) study from Victoria, Australia, provides an example of a well-designed follow-up study.

In this early intervention program 6-year-olds become competent 7-year-old readers and writers. It will not help older children become anything but 7-year-old readers. Therefore sound school reading programs for 8- to 18-year-olds are still necessary to take full advantage of the foundation skills that RR establishes.

Reading Recovery must have what Wilson and Daviss (1994) call "the power of the redesign process in industry:"

- Capitalizing on success,
- Improving quality,
- Expanding usefulness, and

- Keeping the selling price of each unit as affordable as possible for as many consumers as possible.

They warn that the redesign process does not develop without normal growing pains.

One thing we have learned internationally. Children do not have to be slow learners. We have created and categorized slow-learning children by the ways in which we package and deliver our age-bound cohort structure for instruction. Reading Recovery set out to deliver learning opportunities differently. And that perhaps is the general message which this paper can contribute to the topic of this volume.

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