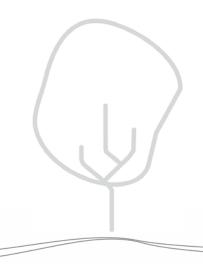# Discussion Paper

Review of the Teaching and Learning Research Initiative

**Report to the TLRI Steering Committee
New Zealand Council for Educational Research**

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1.   Introduction

The Teaching and Learning Research Initiative (TLRI) arose out of a Ministry of Education proposal in 2002 to the Minister of Education for an initiative entitled 'Educational research and development: building knowledge about teaching and learning' (Teaching and Learning Research Development—TLRD). The proposal was structured in such a way as to "strengthen links between research and practice; and build research capability" (letter to Minister of Education, 24 April 2002). Further, this initiative "would … specifically focus on informing practice [rather than policy] and encourage institutions to improve the quality of their research effort. To this end it is intended to be a strategic change tool and research projects involving collective approaches by researchers and practitioners will be sought."

It was also proposed that a co-ordinator be appointed "who will support the development of the programme, monitor the delivery of the research, manage the dissemination of the research to support the research/practice link, and have a role in promoting research capability generally".

The New Zealand Council for Educational Research (NZCER) was contracted to manage and co-ordinate the programme. The first TLRI grants were awarded in 2003.

During the first phase of the TLRI (from 2003 to 2006), NZCER has established a set of policies, processes, and procedures to manage, co-ordinate, and support projects to ensure they have every possibility of success. The end of this phase is marked by NZCER now having operational systems that can be regarded as 'business as normal'. A total of 55 grants have been awarded to projects of varying size, focus, and research design.

During this phase an understanding has emerged of how the TLRI Framework (the aims, principles, values, and priorities) have been operationalised, not only by NZCER through its annual selection process, and co-ordination and support of projects, but also by the researchers and practitioners who have undertaken TLRI projects.

The TLRI is now entering its next phase of development. NZCER is seeking to take stock of what has been learned from the first phase, and build effectively on that to develop the TLRI further and ensure that it continues to add value, and fulfil its intent. Therefore, the review is timely and strategically important for NZCER's developmental work around the TLRI.

The TLRI Steering Committee has been formed by the Director of NZCER to provide advice on strategic future directions about the research priorities for the TLRI. In turn, the TLRI Advisory Board, convened by the Ministry of Education, provides strategic leadership to the initiative and makes recommendations to the Minister of Education about the research priorities.

At the end of 2006, the Director of NZCER, on behalf of the TLRI Steering Committee, commissioned this review of the TLRI programme to inform discussions around future development.

2. Review approach

The primary purpose of this review is to examine the operation, processes, products, and progress of the TLRI since it was introduced in 2003, and to make suggestions for its future development. The approach taken to achieve this included:

- examining the TLRI documentation for how the intent of the TLRI has been defined and operationalised;
- gaining an overview of projects funded by the TLRI between 2003 and 2006;
- reviewing the TLRI programme in relation to the intent of the TLRI expressed through the TLRI framework;
- identifying emergent issues arising out of these; and
- making suggestions for the future development of the TLRI.

The review has been informed by the following:

- Ministry of Education documentation relating to the setting up of the TLRI (2002);
- confidential TLRI contract reports (Ministry of Education, 2006a, 2006b);
- TLRI documentation for submitting Expressions of Interest and Full Proposals*;
- documentation relating to TLRI processes, including selection criteria*;
- biennial TLRI newsletter 'Partnerships'*;
- the full report and summary report of 21 completed TLRI projects (see Appendix 1);
- the research summaries of 35 projects that have been funded but are not yet completed (see Appendix 2);
- interviews with three members of the TLRI Advisory Board (see Appendix 3);
- interviews with the lead researchers of four TLRI projects (see Appendix 4);
- interview with Dr Adrienne Alton-Lee, Ministry of Education;
- discussions with the Robyn Baker, Director of the TLRI Management team, and Jennifer Garvey Berger, NZCER;
- experience gained from being on the selection panel for the 2007 TLRI;
- debriefing meeting of the 2007 selection panel; and
- Baker, R., & Garvey Berger, J. (in press) Research to practice and practice to research: Lessons and opportunities. *British Educational Research Journal* (invited comment).

* These documents are available at http://www.tlri.org.nz/projects/

3.   Structure of the report

The review is presented in several sections which are somewhat cyclic as the features of the TLRI are examined, issues emerge, and clarity is gained around them enabling solutions to be made for future development to make suggestions for its future development.

The first section considers the TLRI framework and processes in order to consider the extent to which they fulfil the original intent of the TLRI and how they have influenced what has been achieved in the first four years. This includes an examination of the balance of the TLRI programme in terms of the category, sector, focus, and data collection methods of the projects funded between 2003 and 2006.

The next section discusses several key issues that I see as potentially the most problematic/challenging in the TLRI, which have emerged through the first four years' experience operating the programme.

In the following section I return to the TLRI framework and take a closer look at what has been achieved in light of the component elements (aims, principles, values, and priorities).

The final section of the report sets out the most substantive suggestions for changes to the TLRI to advance its development.

4. The Teaching and Learning Research Initiative

In this section I set out the TLRI framework as expressed in the overview document (TLRI, 2003, revised 2006) that articulates the underlying principles and requirements for research under its umbrella. Then I examine the relevance of the TLRI elements, and the balance of the projects in the TLRI programme, followed by a consideration of the management of the TLRI.

The TLRI framework

Conceptually, the TLRI is very complex. The overriding desired outcome—*to support research which will lead to significantly improved outcomes for learners*—has embedded within it multiple aims, principles, and values reflecting a range of priorities. The interrelationships of the aims, principles, values, and priorities have been articulated in the overview document and set out the 'defining qualities' that the research conducted under the TLRI umbrella must meet in order to achieve the initiative's intent.

The TLRI has three broad aims, namely:

- to build a cumulative body of knowledge linking teaching and learning;
- to enhance the links between educational research and teaching practices, and researchers and teachers, across early childhood, school, and tertiary sectors; and
- to grow research capability and capacity in the areas of teaching and learning.

Underlying these aims are six principles:

- The research will address themes of strategic importance to education in New Zealand.
- It will draw on related international and New Zealand-based research evidence.
- The research will address strategic themes and be forward looking.
- The project design will enable substantive and robust findings.
- The research will recognise the central role of the teacher in learning.
- The projects will be undertaken as a partnership between the researchers and practitioners.

In addition, the research must be able to demonstrate the following strategic, research, and practice values:

- Strategic: reduce inequalities, address diversity, understand the process of teaching and learning, explore future possibilities;

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- Research: consolidate and build knowledge, identify and address gaps in our knowledge, build capability, be forward looking;
- Practice: Have an impact on practice, be relevant to practitioners, transfer to the learning environment, have benefits to students, parents, teachers, and communities.

Three categories of projects are funded through the programme:

- large-scale projects of up to three years ($120,000 to $400,000);
- medium-scale projects of up to two years ($75,000 to $180,000); and
- small-scale projects of one or two years for those with an innovative idea or who want to pilot an intervention. These are of particular use to practitioner-driven, researcher-supported projects ($50,000 to $100,000). (This has been increased from a one-year project of up to $50,000.)

The programme structure proposed to the TLRI Advisory Board, 2002, indicated that the large-scale, long-term projects (Category A) will provide "substantive findings and provide opportunities for capability building. The medium and smaller projects will need to be supported and managed by the co-ordination team to ensure that *collectively* they contribute to the programme aims, principles, and priorities. Small-scale projects would provide the opportunity for teacher-led researcher-supported research … [would be] entitled 'development research' and would provide for the systematic investigation of a 'good idea'".

Modifications to the TLRI documentation were sought from the Minister of Education to emphasise key elements of the framework, particularly those around researcher–teacher partnerships and the involvement of practitioners in the initiative. Hence, for the 2006 funding round, the TLRI documentation was modified to include: additional research support for practitioner-led research projects; a greater emphasis on "robust and meaningful collaboration between practitioners and researchers—a commitment to the spirit of collaboration to ensure the expertise of researchers and practitioners is involved throughout the research process"; and clarification of expectations relating to researcher-led (initiated) projects and practitioner-led (initiated) research.

Additional clarification was also provided around the TLRI aim to build a cumulative body of knowledge about teaching and learning by suggesting that new projects can be clustered with existing TLRI projects around areas of significance to teaching and learning; and that address significant gaps in our research knowledge.

The relevance of the TLRI framework, aims, principles, values, and priorities

The TLRI documentation, including the overview document, was examined to determine the relative emphases given in the framework and the elements that are embodied within it, to determine the extent to which they collectively express the key intent of the TLRI, and gauge the consistency of those emphases through the documentation and processes.

The TLRI overview document

As discussed above, the overview document sets out the 'raison d'être' of the TLRI—its principles and philosophy and, hence, requirements for the research conducted under its umbrella. It expresses the primary intent of the TLRI—"to support research that will lead to significantly improved outcomes for learners"—consistent with the original proposal for the TLRI (to the Minister of Education, April 24, 2002), then entitled the *Educational research and development initiative*. Other essential elements of the original proposal were to:

- strengthen links between research and practice;
- build research capability;
- specifically focus on informing practice rather than policy;
- encourage institutions to improve the quality of their research effort;
- aim to be a strategic change tool; and
- support research projects involving collective approaches by researchers and practitioners.

The overview document, in seeking to express these elements, has articulated a series of aims, principles, values, and priorities. There are subtle differences between the original proposal for an initiative of educational research and development to build knowledge about teaching and learning, and the expression (or operationalisation) of this intent in the overview document. In the latter, we see all of the original elements represented. However, their expression as aims, principles, values, and priorities have somewhat blurred, and the original intent has subtly shifted. For instance, the intent to "strengthen links between researchers and practitioners" has been incorporated through the requirement for "researcher–practitioner *partnerships*"; "building research capability" has been expressed in the aim to "grow research capability and capacity in the areas of teaching and learning" (through partnerships). The intention "to encourage [research] institutions to improve the quality of their research effort", on the other hand, has been lost sight of and not very successfully realised, due to the prominence of the 'research–practitioner partnership' requirement.

These shifts could not have been anticipated when the overview document was written because it is not until an initiative has been implemented for several years that one can see how elements of it are interpreted and evolve in practice 'on the ground'.

Based on the knowledge gained from four years' experience with the TLRI and the scrutiny of this review, I suggest that the original intent of the TLRI and its essential elements have shifted, and have not been actualised as intended through the TLRI documentation. I will return to this in a later section.

Guidelines for preparing an Expression of Interest and a Full Proposal

Expressions of Interest (EOIs) and Full Proposals (FPs) are sought for research which is consistent with the overall aims of the TLRI, its principles and priorities. Applicants are asked to demonstrate the relevance of their project to the TLRI strategic, research, and practice values and explain how they address each of the principles and priorities. Particular emphasis is given to the key aim of building research capacity and capability in the areas of teaching and learning; to creating working partnerships between researchers and practitioners in order to enhance the relationship between research and practice; and to dissemination activities.

In the 2006 funding round particular focus was given to supporting practitioner-driven projects by shortlisting up to three promising practitioner-led EOIs and, if appropriate, providing additional researcher support for the preparation of the FP.

Criteria for selection (to applicants)

Applicants are informed that the selection panel will be assessing the proposed project in terms of its relevance to the aims, principles, and priorities of the TLRI, as described in the overview document, by using criteria of strategic, research, and practice relevance; evidence of a partnership approach; and evidence of the team's capability to carry out the project.

Assessment schedule (for the selection panel)

The selection panel assesses the proposals with an explicit focus on the project's strategic relevance, the evidence of its research relevance, and practice relevance; partnerships; and the capability of the project team and project management. An overall rating is made indicating whether the proposal is 'strongly recommended', 'recommended', 'marginal', or 'rejected'.

An assessment schedule for each proposal is completed independently by two members of the selection panel, which consists of four senior educational researchers. The convened selection panel, supported by the TLRI management team, discuss each proposal in detail, and final decisions are made about projects to be supported.

Reporting on the research

Each project is required to prepare a full research report and a summary research report. The former serves a number of functions: as an accountability measure for the funding received; to provide future applicants and those interested in TLRI with case studies (models) of completed

projects; and to give insights into how the principles and priorities of the TLRI were realised in practice. The final report is not seen as the major vehicle for dissemination.

Issues with the selection criteria and process

All elements of the TLRI framework appear to be of equal importance or weighting for all proposals. This may not be realistic or appropriate. When proposals vary in size (Category A, B, or C) the potential of projects to adequately meet all the criteria varies. For example, smaller projects cannot be expected to contribute substantive and robust findings. The capability of less experienced teams, particularly in Category C projects, to conduct rigorous research and disseminate the findings in a well-written research report is more limited. The nature of the research question to be investigated also determines the extent to which individual elements of the framework are relevant.

The requirement of researcher–practitioner partnerships to be prominent in all research projects is problematic and potentially distorts the original intent of the TLRI. This is discussed in a later section.

Addressing the need for building capability and capacity in the area of teaching and learning consistent with the TLRI is also problematic and is discussed in a later section.

Proposals are not required to provide sufficient detail and justification of the research design to ensure that researcher–practitioner teams have the required capability to conceptualise the research design and justify decisions in relation to its design. This, in turn, does not allow the selection panel to make a sound judgement of the quality of the research.

The final report only provides a relatively 'superficial' account of the research itself rather than a 'robust' research report. Large proportions of the report are given over to a discussion of the insights into how the principles and priorities of the TLRI were realised through the research project.

Reporting on these elements is important for accountability as well as for disseminating insights into how the TLRI principles and priorities were examined through the research project, but tends to weaken the account of the research itself. Insufficient detail is provided in almost all aspects of the research but particularly the rationale and context for the research, the research design and methods, detailed findings, and thorough discussion of the findings in relation to the literature.

The template for the final report was designed on the premise that greater dissemination effort would be better placed in writing for academic and other professional publications. However, as the research is funded through the TLRI, it would be appropriate for a more robust research report to be a formal requirement of the TLRI. Other publications may be derived from this report. A more robust research report would also provide a better model for other researchers / practitioners in this important part of the research process.

The balance of projects in the TLRI programme

Given the complex and multifaceted TLRI framework, the extent to which the programme is fulfilling its intent can only realistically be examined at the programme level. Individual projects will contribute to different elements of the framework to differing degrees. Therefore, it is the *balance* achieved across the projects that is of primary interest here.

The balance of the TLRI programme can be examined by looking at the projects that have been funded in relation to a number of factors which reflect the intent of the initiative: the grants awarded between 2003 and 2006 by category and educational sector; the explicit inclusion and focus on Māori and Pacific peoples; the topics of research projects; and research design and methodologies. We can then ask for each factor, 'How well does the *portfolio of projects* reflect the balance desired for the TLRI programme?' and 'What needs to change, if anything, to achieve the desired balance?'

Grants awarded 2003–2006/7

Tables 1 to 3 summarise the grants awarded between 2003 and 2006/7 as a proportion of Expressions of Interest (EOIs), by category, and by educational sector.

Table 1 **Number of EOIs received and grants awarded, 2003 to 2007**

Year	Number of EOIs	Shortlisted: Full Proposals[a]	Awards granted[b]
2003	180	30 (17%)	13 (43%)
2004	72	24 (33%)	18 (75%)
2005	67	22 (33%)	12 (55%)
2006	52	24 (46%)	12 (50%)
2007	40	14 (35%)	—
Total	409	114 (28%)	55 (48%)

[a] Percent of EOIs that were shortlisted.

[b] Percent of Full Proposals that received grants.

Table 2 **Number of EOIs, Full Proposals, and TLRI grants awarded by category, 2003 to 2006**

Year		Category A[a]	Category B	Category C	Total
2003	EOI	16	86	76	180 [b]
	FPs	0	19	11	30
	Grants	0 (0%)[c]	9 (10%)	4 (5%)	13 (7%)
2004	EOI	11	32	29	72
	FPs	4	9	11	24
	Grants	3 (14%)	8 (25%)	7 (24%)	18 (25%)
2005	EOI	12	35	20	67
	FPs	3	11	8	22
	Grants	2 (17%)	5 (14%)	5 (25%)	12 (18%)
2006	EOI	6	35	11	52
	FPs	1	17	6	24
	Grants	0 (0%)	9 (26%)	3 (27%)	12 (23%)
TOTAL	EOI	45	188	136	371
	FPs	8	56	36	100
	Grants	5	31	19	55

[a] Some projects applied for two different funding categories—these have been classed under their highest bid (e.g., an EOI wanting either A or B has been classed as an A).

[b] In 2003, two EOIs didn't specify what funding they wanted—the total includes these.

[c] Percent of EOIs that resulted in grants awarded.

Table 3 **TLRI grants awarded to education sectors by category, 2003 to 2006**

Education Sector	Category A	Category B	Category C	Total
Early childhood	1 (20%)	6 (19%)	1 (5%)	8 (15%)
Schools	1 (20%)	20 (65%)	14 (74%)	35 (63%)
Tertiary	3 (60%)	5 (16%)	4 (21%)	12 (22%)
Total	5	31	19	55

From this information it appears that:

- Since 2003, the number of EOIs received has declined from 180 to 40 in 2007. Of the EOIs received, 17 percent, 33 percent, 33 percent, 46 percent, and 35 percent respectively were shortlisted for Full Proposals. Of the Full Proposals received, 43 percent, 75 percent, 55 percent, and 50 percent respectively were awarded grants for the years 2003 to 2006. One might expect that it would take several years for a pattern of EOIs in relation to those shortlisted, and for the pattern of those shortlisted in relation to those awarded grants to be 'settled'. It would appear that approximately 35 percent of EOIs might be shortlisted; and approximately 50 percent of those short-listed might be awarded a grant.
- The number of grants awarded has declined since 2004, although five Category A grants, which are more substantive in scope and funding, were awarded in 2004 and 2005.
- Of the 55 grants awarded between 2003 and 2006, 63 percent (35) of them were in the school sector; 22 percent (12) were in the tertiary sector, and only 15 percent (8) were in the early childhood sector. Even when the category of grants are weighted to reflect the relative size of the projects (i.e., Category A grants are weighted 3, Category B are weighted 2, and Category C are weighted 1) the relative proportion of grants awarded in each sector remains much the same (17 percent, 57 percent, and 23 percent respectively).
- The grants awarded in 2006 reflect an increased focus on the early childhood sector compared to previous years, with three of the 12 grants being awarded for projects in this sector.
- 15 grants (27 percent) awarded between 2003 and 2005 have an explicit inclusion and focus on Māori and Pacific peoples.

A concern expressed by the TLRI management team is that the quality of proposals has 'plateaued'. That is, there does not appear to be any growth in the quality of research proposals received. This may be a feature of the relative proportions of Category A, B, and C projects received, as we might expect higher quality proposals to be submitted for Category A (and B) than for C. Other potential influencing factors are: the constraints of the TLRI framework itself, with its emphasis on fully collaborative partnerships in all phases of the research design; and the lack of criteria in the assessment of the proposals relating to the quality and rigour of the research design.

Research designs and methodologies

The completed TLRI projects examined have used a variety of research designs and procedures for collecting data. Table 4 summarises broadly the characteristics of 21 completed projects.

Table 4 **Characteristics of the research design of 21 completed TLRI projects**

Characteristics of research design	Number of projects	% of projects
Substantial use of quantitative data	7	33
Quasi-experimental design	4	19
Measured student outcomes	4	19
Substantial use of qualitative data	18	86
Planned 'meta analysis'	12	57
Multiple methods of data collection	17	81
Case studies/action research	15	71
Kaupapa Māori	2	10

This very coarse analysis of the research designs indicates that of the 21 projects the vast majority were substantially of a qualitative design (86 percent) and used multiple methods of data collection (81 percent) (such as, interviews, observations, diaries, field notes, videotaped recordings, scrapbooks, photographs, focus group discussions, team meeting discussions).

Approximately half (57 percent) were of a *planned* 'meta analysis' type. This included those studies where there were multiple case studies, or action research projects which investigated something in common (as opposed to an incidental/retrospective synthesis of essentially independent case studies with little of their respective focus in common).

Four (19 percent) used measures of student outcomes/achievement.

Four (19 percent) used a quasi-experimental design intended to investigate specific hypotheses, or the effects of specific interventions.

Two (10 percent) incorporated Kaupapa Māori methodologies.

I have not analysed the other 34 projects which have not yet been completed and cannot be confident that this pattern is reflected in them. However, it highlights a possible trend of the type of research designs being by supported by the TLRI. The question is then, 'Does this profile produce the balance desired from the TLRI programme?'

Topics of research projects

An examination of the titles of the 55 projects supported with TLRI grants reveals that the range of topics is considerable (Table 5). As one would expect from applying the selection criteria established, all projects met the requirements of strategic, research, and practice values specified by the TLRI criteria, although to varying degrees and expressed in different ways.

Table 5 **Research focus of TLRI projects by education sector, 2003 to 2006**

Research focus	Number of projects[a]	Education sector[b]				
		E[c]	P	S	T	O
Numeracy/mathematics	11	–	6	6	1	
Literacy	13	–	9	3	1	
Arts	1	–	1	–	–	
Science/technology/environmental education	6	–	3	1	2	
Competencies/dispositions	1	1	–	–	–	–
Māori and Pacific people	9	1	3	1	3	1
Diverse students	12	2	6	3	1	
Students with English as a second language	2	–	–	1	1	
Instructional/assessment policies and practices	32	3	15	6	7	1
Teacher/student beliefs	2	–	1	1	–	–
Education systems	7	1	1	2	3	
Partnerships	2	1	1	–	–	–
Professional development/Initial teacher education	11	1	4	5	–	1
TOTAL		10	50	29	19	3

[a]   Number of projects = 55.

[b]   Where the number of education sectors exceeds the number of projects for any given focus, this indicates that some projects covered more than one (usually adjacent) sector, e.g., primary/secondary; secondary/tertiary.

[c]   E = Early childhood; P = Primary school; S = Secondary school; T = Tertiary; O = Other (e.g., teachers, adults).

Again, this is a somewhat coarse analysis. However, it appears that:

- Just over half (58 percent) of the projects had a specific focus on instructional or assessment policies and practices.
- 23 (42 percent) had a focus on particular subgroups of students: Māori or Pacific peoples (16 percent), diverse students (22 percent), or students who have English as a second language (4 percent).
- 11 (20 percent) had a focus on professional development or initial teacher education, with twice as many within the secondary school sector than in the primary school sector.
- 48 percent had a focus on either numeracy or literacy.

The 55 TLRI projects were examined in relation to the extent to which their focus included a direct or indirect examination of teaching and learning. The projects have been grouped broadly into five categories and are summarised in Table 6.

Table 6 **The teaching and learning focus of TLRI projects**

Group	Focus of research	N of projects	% of projects
1	*Direct focus* on improving student outcomes/developing instrument to measure student outcomes (qualitative and quantitative)	13	24
2	*Indirect focus* on improving student outcomes through changes to teaching practice, professional development of teachers	30	54
3	*Indirect focus* on student outcomes through examining systems, e.g., recruitment, retention, policies	7	13
4	*Indirect focus* on student outcomes through relationships between parents/whānau and teachers	2	4
5	*Indirect focus* on teaching profession, experience of teachers, retention of teachers	3	5

Note: Number of projects = 55.

From this table, it can be seen that:

- Twenty-four percent of the projects appear to have a direct focus on student outcomes—that is, there is a quantitative or qualitative measure of effects of changes in teaching practices on students' learning (outcomes).
- Fifty-four percent have an indirect focus on student outcomes because they focus on teaching practices and teacher professional development (including collaborative discussions, 'classroom-based research', or critical inquiry); 13 percent through focusing on systems, policies, and retention of students; 4 percent by focusing on relationships between family/whānau and teachers; and 5 percent on the profession of teaching (preparation, experience, and retention of teachers).
- In the majority of projects the links between teaching and learning are indirect or based on the inference that by improving teaching, improvements to student outcomes will follow. The inference weakens as the links become more indirect from groups 1 to 5.
- In the broader view, 78 percent of the projects have a direct teaching and learning focus, although evidence of student outcomes was not explicitly gathered.

Balance of projects by category

- The majority of TLRI projects are Category B (56 percent) or Category C (35 percent). Only 9 percent of the projects are Category A. However, viewing the projects in this way does not portray the balance of the projects by category in relation to the *funding* attached to them. Category A projects may be granted up to $400,000; Category B projects up to $180,000; and Category C projects up to $100,000. Taking this into account, the respective proportions of funds by category are: 21 percent, 59 percent, and 20 percent for Categories A, B, and C.

- However, what should be noted is that Category A projects are the most likely to: generate the most substantive and robust research findings; make the most significant contributions to building a body of knowledge about teaching and learning; grow the research capability and capacity in teaching and learning; and have the greatest potential for interinstitutional collaboration. It may be appropriate to consider whether a greater proportion of the TLRI funding should be allocated to these projects.

- Category B projects are reasonably substantive projects which have potential for building research capability, but are not of a size to be able to produce substantive findings. Many of the Category B and C projects have involved a number of individual case studies which may be 'nested', that is, have a common theme.

- Category C projects require the greatest level of support and mentoring from NZCER because of the relative inexperience of the researcher–practitioner teams in terms of research. This inexperience has been particularly noticeable in the quality of written research reports and limited dissemination activities.

Balance of projects by education sector

Currently the balance of projects in the early childhood, school, and tertiary sectors are 15 percent, 63 percent, and 22 percent, respectively. This would seem to be an appropriate balance.

Balance of projects by category and education sector

Although the number of Category A projects is small, 60 percent of them are in the tertiary sector; while 65 percent of Category B projects and 74 percent of Category C projects, are in the school sector. This seeming imbalance is not unexpected, however, due to the fact that the majority of researchers are in tertiary institutions, and have research as well as teaching obligations. This is quite different from the obligations of practitioners in the other education sectors where their obligations centre around teaching.

Balance of projects by research design and focus

A large majority of the projects are substantially qualitative with multiple sources of data. Only a third of the projects are substantially quantitative, and only a fifth use measures of student outcomes (qualitative or quantitative).

5. The management of the TLRI

The processes and procedures for seeking expressions of interest, identifying projects for which full proposals will be sought, and selecting projects for funding are now well established. So too are the mechanisms for supporting and mentoring projects where necessary. The effective management and co-ordination of the initiative is attributable to the proactive work of NZCER, particularly the Director, in ensuring that the needs of project teams are met so as to achieve the intent of the TLRI.

The aims of building research capability and capacity and researcher–practitioner partnerships have been realised in the implementation of the programme by NZCER being both responsive to issues as they have evolved, and proactive in identifying areas for future development to more closely align the evolving TLRI programme with its intent. The Ministry of Education review (2006a, pp. 1–2) articulated the following three features, among others, of the NZCER management which can be regarded as exemplifying the aims of the TLRI itself:

* "intellectual leadership [as evidenced by] … proactive recognition and management of the challenges to remain true to the TLRI's intent";
* "the ongoing incorporation of key learnings about 'best practice' programme co-ordination into standardised policies and procedures", such as, comprehensive feedback to research teams on their Expressions of Interest and unsuccessful Full Proposals so that they are able to learn and refocus subsequent applications; and
* supporting capability building for researchers and practitioners around teaching and learning through establishing a national mentor register, facilitating partnerships between practitioners and experienced researchers, running workshop programmes, researching the role of teachers in current school-based TLRI projects (Oliver, 2006), and supporting the discussion and dissemination of findings in a range of forums.

Based on the experience of the first three years of the TLRI, a number of refinements were made to TLRI documentation in 2005 to re-emphasise the expectations of project proposals to fulfil the intent of the programme in several areas. These adjustments were partially in response to instruction from the Minister of Education to ensure that practitioners' involvement as full members of research teams was preserved. These adjustments suggest that the emerging body of research within the programme (the *balance* of the programme) was failing to fully realise the intent of the TLRI. Specific adjustments were made to reinforce the expectation that a partnership approach should be adopted *at all stages of the research process* and to emphasise changes to criteria requiring proposals to retain a focus on promoting students' *educational achievement*; contribute to building a cumulative body of knowledge by "*acknowledg[ing]* existing information on teaching and learning and *demonstrat[ing]* how it can build on that knowledge base"; and

more explicitly demonstrate how the research will have practical application and lead to improvements in learners' outcomes.

The TLRI management team has gone well beyond its contractual obligations to "co-ordinate and promote the TLRI". Not only has the management team undertaken its responsibilities with an approach that is in tune with the philosophy and intent of the TLRI itself, but it has also sought to continually learn from the breadth of experiences from the TLRI operation, processes, and research in order to continue to add value. Its strong commitment to continue to optimise the opportunities to realise both the intent of the TLRI and to maximise the achievements from the TLRI programme has been described, rather understatedly, by the Ministry of Education as "value for money".

It is indeed fortunate (for the Ministry of Education, and the New Zealand research and teaching communities) that the management team has exercised such a level of intellectual leadership. However, this has been accomplished within the financial constraints of a contract which funds NZCER to co-ordinate and promote the TLRI, but actually seeks more—intellectual leadership.

Greater financial resources should be allocated to NZCER to 'manage' the TLRI. This should take into account the activities required, in addition to co-ordination and promotion, to develop the potential of the TLRI to effectively fulfil its original intentions. Further financial support should be sought from the Ministry of Education to enable the management team to conduct those activities which will enhance and further develop the potential of the TLRI to "support research which will lead t significantly improved outcomes for learners".

6. The TLRI framework—a close look

This section looks at several elements of the TLRI framework and considers how they might best be achieved given the experience of the TLRI to date. In doing this, several key issues are identified that may be hindering full realisation of the TLRI intent.

Aim 1: Building a cumulative body of knowledge about teaching and learning

There are several ways to examine the extent to which the TLRI programme is building a cumulative body of knowledge about teaching and learning.

Knowledge about the linkages between teaching and learning

As discussed in the previous section, Table 6 suggests that only a modest proportion of projects directly examine the linkage between teaching and learning by gathering evidence of students' learning as a consequence of changes to teaching practice.

The overarching desired outcome of the TLRI—*to support research which will lead to significantly improved outcomes for learners*—is therefore threatened by the omission of research to gather student data. TLRI documentation refers to the need for projects to recognise the central role of teaching in improving students' learning. This requirement is accommodated in projects by ensuring that a 'robust' and effective partnership with teachers is established. However, recognising the central role of teachers in students' learning should not become a desired outcome in and of itself. This has the danger of restricting the research to the level of examining teachers' practices without examining any accompanying effects on students' learning. The management team has acknowledged, and I have observed it myself in the work for this review, that there is a fine line between 'research with teachers' (an aim of the TLRI) and 'professional development for teachers' (*not* an aim of the TLRI).

'Serial' projects

The history of the TLRI is very short. However, in that time, it appears that four current projects are building on earlier TLRI projects in order to deepen and broaden the initial exploration: Sandretto, Meaney, McNaughton, and Ritchie/Rau. In the future, the TLRI might explicitly encourage more such 'serial' projects.

Generalizability

The level of generalizability of findings about teaching and learning that arises out of the TLRI is variable. This is not unexpected given the range of 'case study' or highly contextualised projects. One project stands out as being exemplary with respect to the generalizability of its findings. Stuart McNaughton's (2003) research design, which deliberately and explicitly sought generalizability of its findings, provides a model for other researchers seeking to achieve similar generalizability in their research.

Another project, Neville-Barton (2003), sought to apply a 'scientific' research approach to several of its school-based studies.

In the many other projects which involve a number of 'nested' school-based case studies, the level of generalizability is less strong. Often 'fuzzy generalizations' (an expression used by Hill et al., 2004) are possible by synthesising the commonalities of findings from the nested studies. In Hill et al.'s project this was assisted by the collection of student achievement data and 'meta' analysis/synthesis of the linkages which could be made between teaching approaches and student learning. In other projects, the meta analysis was mostly qualitative.

Another element of the meta-analytic approach used in these projects is the extent to which the nested studies were connected in a planful way, such as in Sandretto's project, or were connected incidentally/retrospectively.

A truism for all research is that, at most, pieces of research can be expected to contribute 'snippets of insights' which over time contribute to building a cumulative understanding of a phenomenon. The cumulative body of knowledge about teaching and learning built up through the TLRI programme has not been fully realised yet.

Need for focus on body of knowledge

There are lessons to be learned from each TLRI project. The lessons may be very modest in some cases and more extensive in others, depending on the scope, rigour, and robustness of the findings. The lessons may be in relation to three major themes fundamental to the TLRI: teaching and learning; researcher–practitioner partnerships; or building research capability and capacity. As stated earlier, the reporting requirements tend to give the latter two themes greater prominence than the first theme. This is also reflected in the list of publications and conference presentations arising out of projects. Building effective partnerships or building capability and capacity through a TLRI project should not become ends in themselves. The research is of primary importance in building a body of knowledge about teaching and learning. Working in collaborative teams of teachers and researchers assists in grounding the research in the realities of teaching and learning situations, while also allowing for both parties in the team contributing to, and learning from the strengths of the other.

The TLRI programme is well placed at this stage of its development to optimise what has been learned from individual projects by synthesising the findings across projects. Such syntheses

would articulate the collective wisdom gained from the programme to date, and give leverage and direction for subsequent research.

Aim 3: rowing research capability and capacity in the areas of teaching and learning

At the outset of this review, my thinking around capability and capacity building was influenced by the often-discussed necessity to build educational research capability and capacity within New Zealand generally. In fact, this was the specific focus of a joint Ministry of Education–New Zealand Association for Research in Education forum held in the early 2000s. The topic of building research capability and capacity has continued to be the centre of concern and discussion for the NZ educational research community at large. This orientation, therefore, led me to consider the issue of the aim to build research capability and capacity within the TLRI differently from a number of people interviewed (although not all), and possibly differently from the original specifications and aspirations for the TLRI itself.

The understanding around building research capability and capacity can be dichotomised. There are those who consider the TLRI aim is/should be primarily to build research capability and capacity in *researchers*, particularly in emerging and novice researchers. There are others who consider that the TLRI aim relating to building research capability and capacity is/should be primarily to build research capability and capacity amongst *teachers/practitioners*. In the former, the focus is on building research capability and capacity for educational research more broadly, but specifically as it applies in learning/teaching contexts. In the latter, the focus is on building research capability and capacity within practitioners as a means for them to better examine and make changes to the effectiveness of their own practices with the aim of improving student learning. In this situation, the TLRI provides an opportunity for teachers/practitioners to experience and develop the skills of systematic enquiry (research) into their professional practice, and may be considered as primarily professional development.

This interpretation has led to the use of many terms to describe the teacher/practitioner within TLRI projects: teacher-researcher; teacher-as-researcher; the enquiring practitioner; reflective practitioner; action researcher. The roles that practitioners take on within the project also vary (this is discussed later) and any single descriptor, e.g., 'teacher-researcher', itself has many manifestations.

The research that has been undertaken thus far in the TLRI has limitations in the level of rigour and robustness of the findings, the generalizability of the findings, the 'substantiveness' of their contribution to building a cumulative body of knowledge, and the breadth of dissemination possible. The level at which the 'sights' of the research as both a discipline (for researchers) and as a professional activity (for practitioners) can be set is much lower than the level of the sights that might be set for research which aims to build research capability and capacity among

educational researchers themselves. This provides some threat to achieving Principle 4: "The TLRI research will be designed to enable substantive and robust findings".

There is, of course, a middle ground in which both orientations may be appropriately accommodated, which I suspect is what is actually being realised within the TLRI projects as they have developed and evolved. This has been influenced by the TLRI documentation that sets out the specifications for the types of projects supported.

The TLRI documentation relating to building capability and capacity is ambiguous and contradictory. Each TLRI project I have examined has approached the requirement to build the capability and capacity of researchers and practitioners in quite different ways. While different approaches to building capability and capacity are to be valued, there is a danger that the aims of the TLRI will not be met or will be compromised if the specifications around capability and capacity building are not more clearly articulated. What is understood as research by a researcher is quite different from what is understood as research by a practitioner.

The overview document (2003) contains the following statements relating to building capability and capacity:

The TLRI aims to: "grow research capability and capacity in the areas of teaching and learning" (p. 1).

Principle Six states that the key aim of the initiative is to "build capacity and capability in a reciprocal process which:

−   builds the capability of researchers to undertake quality research;
−   builds the capability of teachers to improve their teaching practice through engaging with the findings of the research;
−   deepens researchers' understanding of teaching and learning by engaging with teachers; and
−   enables teachers to gain expertise as teacher-researchers, supported by researchers." (p. 2)

One of the priorities for Research Value in the overview document (p. 2) is that the proposed research "should create and use opportunities to develop a greater capacity and capability within the educational research community for undertaking quality research in this area [teaching and learning]".

The requirement to build research capability and capacity has been operationalised in different ways in research projects, thus exacerbating the confusion. In many projects, the aim has been to build research capability of practitioners only; in others it has been to build research capability in emerging researchers; and in others it has been to build capability in both parties.

To better understand what has evolved in terms of how project teams have interpreted the requirement to build capability and capacity it is necessary to examine the nature of the researcher–practitioner partnerships.

Aim 2: Researcher–practitioner partnerships

The TLRI documentation is unequivocal on the requirement that research be done in partnership between researchers and practitioners, and this constitutes Principle Six of the framework. Such partnerships have implications for the other aims, values, and priorities of the TLRI.

In order for the projects to "contribute to practice and lead to significant improvements and outcomes for learners", they "all will involve partnership between researchers and practitioners, from the design and conduct of the research, to communicating the results to teachers and other educators who can use them to make a difference to practice" (TLRI, 2003, revised 2006).

The respective roles of researchers and practitioners varied widely in the partnerships of the completed projects.

Researcher/practitioner roles

The 'researcher' role in TLRI teams has involved:

- the project being led by an experienced principal researcher;
- the project being led by an experienced principal researcher with emerging (less experienced) academic researcher(s)/teacher educators (e.g., studies led by McNaughton, Neville-Barton, and Barton, respectively);
- the project being led by experienced researcher/s with practitioners who are gaining advanced qualifications (Masters, PhD, EdD) (e.g., Hill and Robertson et al.); and
- the project being led by a relatively inexperienced researcher (most notably in Category C projects).

The 'practitioner' has been cast in the following roles:

- research/passive participant—the subject of research;
- active participant—taking part in the research as an active participant by examining the outcomes of changes to their practices (sometimes they have been described as 'teacher-researchers'); and
- teacher-researcher—designing and carrying out an action research project within their classroom, supported by a researcher—this is the most typical role.

'Teacher-researcher'

The term 'teacher-researcher' is very problematic because it too is ambiguous. As indicated above the term has been used to describe the role of what might be better described as an 'active participant'—a practitioner who responds to the evidence of teaching and learning arising during the research to better understand what changes to teaching approaches might be appropriate and/or what student learning has occurred. This would be more accurately described as an 'evidence-based practitioner' or 'inquiry-based practitioner', 'conscious enquirer' or, at most,

'action researcher'. In any of these latter roles the primary responsibility of practitioners remains a professional one of being an effective teacher who seeks to improve students' learning.

I believe that developing the skills of practitioners to a level of being effective enquiry-based practitioners is a realistic goal in school-based research such as that supported by TLRI. One researcher interviewed believed that a more appropriate term to describe the qualities/roles of practitioners in TLRI partnerships is 'action learner'. That is, practitioners can become well equipped to be effective action learners in the sense of being actively involved in learning about their teaching through systematic enquiry, and understanding the linkage between their teaching practices and students' learning. This distinction also takes cognisance of the primary responsibility of practitioners being to teach effectively and improve students' learning, rather than to develop as a fully independent researcher with the full range of research skills. One interviewee suggested that it is actually unethical to divert a teacher from this primary responsibility.

In order for practitioners to be 'researchers' in the full sense of the term and to conduct 'rigorous and robust' research an advanced study and understanding of research methods would be required. To have an expectation that practitioners become effective researchers through TLRI partnerships is therefore unrealistic, even for those practitioners undertaking the research for postgraduate university qualifications.

Partners . . . from the design and conduct of the research, to communicating the results to teachers and other educators

The roles that researchers and practitioners actually take on in a project are very dependent upon the expectations of the members of the partnership, the realities of working in schools, and the particular strengths (and interests) of the respective parties. In some cases it is clear that the initial expectations of the practitioners are somewhat different from those of the researchers. The practitioners in some projects at first have an expectation that researchers will be responsible for the research (and are comfortable with that) and can be somewhat alarmed to learn that they are required to be more than passive participants. In other projects, the 'partnership' is fully integrated into all stages of the research process from planning to dissemination. And, naturally, there is a range of variation between these two extremes.

Completed research reports, Oliver's commissioned research findings (2006), and the experience of the TLRI management team in supporting individual teams to work effectively have jointly led to one of the most important sets of findings arising out of the TLRI programme and its portfolio of projects. This relates to the importance of establishing effective partnerships, the qualities on which effective partnerships are based and can flourish, and the need to sustain them throughout the life of the project (and possibly beyond, during dissemination activities).

Developing partnerships between researchers and practitioners during all phases of the research, *from the design and conduct of the research, to communicating the results to teachers and other*

educators is desirable but very challenging, although not impossible, as some projects have demonstrated.

In any project, a successful/effective partnership must (among other things) allow both parties to contribute their strengths, and be of mutual benefit. In addition, for new knowledge to be built, there also needs to be challenge. However, I believe that the challenge has to be such that it is constructive, achievable, and beneficial. Both the researchers and the practitioners from one project have described the experience as one of the most difficult in their careers. The former from the perspective of researching in a school with a team of practitioners; the latter from the demands of having to be actively rather than passively involved in the research.

Experience has shown that *time* is necessary to build a partnership and establish trust, respect and common understandings of the collaborative research activity, roles, and responsibilities etc. so that teachers can be full members of the partnership throughout the whole research process from planning to dissemination. Therefore, projects should allow adequate time to establish the partnership as the essential first step of the research.

The challenge of establishing and maintaining an effective partnership is also reflected in the amount of writing that has been devoted to it in dissemination activities, as opposed to writing about the substantive findings from the research itself.

The Principles

1.   The research will address themes of strategic importance to education in New Zealand

This is an important principle for the TLRI—funded as it is by the Ministry of Education. The strategic importance of the research is ensured through the criteria for selecting proposals for funding. It may be appropriate for the TLRI Advisory Board to review the current strategic priorities in the TLRI overview document in light of changing government priorities.

2.   The research will draw on related international and New Zealand-based research evidence

This principle is very important in order to ensure that the research is building on what is already known from research and to ensure that it is addressing a significant gap in knowledge. Research teams should be encouraged more strongly to examine meta analyses of relevant research evidence (particularly NZ-based research, such as the Best Evidence Syntheses (BES), and national professional development/curriculum/assessment initiatives) as a basis for demonstrating that their research is building on what is already known and will contribute to filling a significant gap in knowledge.

3. The research will address strategic themes and be forward looking

Again, this is a very important principle in order to retain a focus on future developments and innovation. The statement of the principle should remove "address strategic themes and" because it duplicates the first principle.

4. The project design will enable substantive and robust findings

This is an essential principle in light of the TLRI's aim to build a cumulative body of knowledge about teaching and learning which is informed by, and informs, the national and international literature. As discussed in an earlier section, the type of research design that is possible with practitioner-led, exploratory, case study/action research projects limits the ability to produce substantive and robust findings. This principle must be considered in the balance of the TLRI programme as a whole, recognising that substantive and robust findings are most likely to be found from projects which are researcher led.

5. The research will recognise the central role of the teacher in learning

This principle fails to represent the importance of placing the teacher *and learner* at the centre of the research. As stated, many projects have examined the effect of the 'research'/researcher-teacher interactions on teaching practice without examining or gathering evidence of student learning. It would be appropriate to review this principle to better reflect the importance of the learner. For example: The research will recognise the central roles of the teacher *and learner*.

6. The projects will be undertaken as a partnership between the researchers and practitioners

As discussed above, this principle is at the heart of the TLRI as it is articulated presently. However, as stated in an earlier section, I do not think that it is consistent with the original intention of the TLRD. In fact, the nature of the 'researcher–practitioner partnership' sought in the TLRI documentation, and its most recent revisions, places severe constraints on other key aims and principles being achieved, such as, building a cumulative body of knowledge, growing research capability and capacity among researchers, and creating substantive and robust findings. It would be appropriate for the Advisory Board to review this principle and the way it is operationalised in the TLRI documentation and processes.

Values—Research, practice, and strategic relevance

It is appropriate that the TLRI have values associated with research, practice, and strategic directions. However, the strategic priorities should be reviewed in light of current governmental strategic priorities. The research priorities are relevant, but may need to be restated/reviewed in light of how they are being achieved in current TLRI projects and the TLRI programme overall. The practice priorities should also be reviewed to ensure that they are realistically achievable through the TLRI.

Previous modifications to the TLRI

A number of modifications to the TLRI documentation have been made, most notably for the 2006 funding round, in order to emphasise the significance and relevance of key elements of the TLRI framework. Modifications have included emphases on the nature of partnerships expected; and adjustments to Category C projects to reflect that they are primarily for practitioner-led projects. A useful distinction is made between researcher-led projects and practitioner-led projects, with the respective requirements for partnerships and research capability reinforced.

The TLRI management team has adopted a number of strategies to inform potential researchers/practitioners about the TLRI and expectations of the research under that umbrella; to support research teams to complete their projects, particularly in relation to writing their final report; and in enabling opportunities for practitioners to share their experiences and research findings. The New Zealand Association for Research in Education (NZARE) is a forum where the findings of many TLRI projects are presented.

7. How can further value be added to the TLRI?

This final section considers the new thinking of the management team, as represented in the paper by Robyn Baker and Jennifer Garvey Berger (in press), and discussions with them as part of this review. It is followed by a number of suggestions that arise out of my analyses and thinking reported in earlier sections of this report.

New thinking

I read the Baker and Garvey Berger (in press) paper entitled 'Research to practice and practice to research: Lessons and opportunities' after I had completed the substantive work for this review. They note the particular benefits and challenges of the TLRI which are largely reflected in this review. In considering how to further develop the TLRI in light of their experience with it and the lessons from other similar initiatives, such as the Teaching and Learning Programme in the UK, they propose "exploratory studies aimed at generating new ways of looking at current ideas and practices with a view to developing alternative and forward-looking understandings of practice". This is worthy of consideration as a way to 'push on' benefit from what has been learned so far in the TLRI and further advance its aims (that it should be about partnerships, research based, centred on teaching and learning, forward looking etc). A fruitful way of using this approach would be in identifying the 'big lessons' from the TLRI programme, as well as the 'small lessons' from particular TLRI projects, or on other research/practices.

Suggestions for changes to the TLRI

There is no doubt from those interviewed that one of the greatest benefits of the TLRI is the opportunity for the education sector to determine and shape the educational research agenda. In New Zealand, much educational research is currently commissioned and funded by the Ministry of Education to investigate its own initiatives. Opportunities (that is, funding) for 'blue skies' investigations from which significant new knowledge can be created are limited. Therefore, it is essential to retain this as a primary opportunity afforded through the TLRI.

However, the freedom and independence of TLRI-funded research is tempered somewhat by the equally strong aims of TLRI projects to meet strategic priorities determined by the Ministry of

Education, and to a lesser extent by the TLRI's own complementary (and sometimes, competing) principles and values.

In this section, I offer suggestions for the Advisory Board, via the Steering Committee, to inform the thinking about changes for the future shape and direction of the TLRI.

It is entirely timely, appropriate, and necessary that the TLRI framework and its elements be reviewed in light of the experiences gained in the first phase of the TLRI. The beginning of this next phase is an ideal opportunity to signal explicitly how the TLRI intent can now best be achieved given what has been learned already. The suggestions are grouped around the intent of the TLRI; the TLRI framework and its elements; optimising what has been learned so far; and adding value to the TLRI.

1.   The intent of the TLRI

- Clarify the intent of the TLRI as it is expressed currently in the overview document compared with the original intent of the TLRD proposed in 2002.
- Explicitly affirm the 'opportunity' the TLRI affords for conducting 'blue skies' research and investigating 'blue skies' ideas and innovations.
- Clearly situate the TLRI as one of a suite of opportunities for research and development in New Zealand and articulate the particular value that its approach (framework) brings to advancing the education of students in New Zealand.
- Align the TLRI with other national initiatives which are also contributing to building a body of knowledge about teaching and learning, such as, BESes, national professional development programmes, and other national initiatives in curriculum, assessment, etc. in order to maximise the opportunities for building on what has already been learned through research.

2.   The TLRI framework and its elements

- Review the TLRI framework, including the aims, principles, values, and priorities, and the alignment of these elements in the overview document.
- Establish whether some elements are of primary (greater) importance and others are of secondary (lesser) importance.
- Clarify the apparent confusion around what is meant by 'growing research capability and capacity building'. It is my opinion that the primary focus for growing research capability and capacity should be among researchers within tertiary institutions. Building research capability and capacity among practitioners would, therefore, be a secondary focus, and set realistically at a level which provides benefits for their practice, namely, becoming a conscious enquirer, or active learner.
- Examine the TLRI expectations around 'researcher–practitioner partnerships'. The original intention of the TLRD would appear to have been to ensure a strengthening of the links between researchers and practitioners in order to optimise the opportunity for the research to

be meaningful and relevant to the work of practitioners. The principle to be preserved through the TLRI would, therefore, seem to be more appropriately interpreted as ensuring *collaboration* between researchers and practitioners in such as way that researchers conduct 'research *with* practitioners', rather than to 'research *on* practitioners'.

3.   Optimising what has been learned so far

- Allocate a portion of the annual TLRI budget to projects which synthesise the key findings across projects in relation to (i) teaching and learning; (ii) building effective partnerships; and (iii) building research capability and capacity; and through these, identify areas for future research. Of particular importance would be a synthesis (or syntheses) of completed TLRI projects to determine what has been learned about improvements in teaching and learning that lead to significantly improved outcomes for students. These could be by sector or across sectors; within curriculum areas or across curriculum areas; for particular groups of students or for students generally; for particular types of teacher 'action' (intervention) or across types of teacher action.

- Such syntheses are critical to optimising what has been learned from the TLRI research to date, and to provide a platform for future research and development. It would be important for such syntheses and other strategically important 'pieces' of developmental work to be commissioned by the management team at regular and timely intervals to (i) facilitate building and articulating the cumulative body of knowledge emerging from the TLRI programme so that it contributes in substantive ways to current knowledge and new thinking; (ii) continually 'refresh' and inform the ongoing development of the TLRI programme to best achieve its intent; (iii) enable the TLRI management team to be responsive to new learning from its research findings and experiences; and (iv) enable the TLRI continue to be relevant, valuable, and vibrant as a unique initiative that is advancing the linkages between teaching and learning through the joint efforts of researchers and practitioners working together in a variety of ways.

- The TLRI Advisory Board (through the recommendations of the management team) is the most appropriate body for identifying what commissioned or strategic developmental work is required. I believe that such work should fall under the umbrella, and be the responsibility, of the TLRI management team. As has been discussed earlier, the NZCER management team has been exemplary in undertaking a range of initiatives to co-ordinate and promote the TLRI programme, and going far beyond this contractual brief to support research teams, and to continue to critically examine their work and the work of the TLRI programme with a constant view to improvement. Commissioning this review is one such example of the proactive way in which the team has operated to advance the interests and value of the TLRI.

- To maximise the potential of the TLRI, and to address the sometimes competing elements of the TLRI framework, I suggest that three categories of research be undertaken as follows:

- *Category I:* Research-led (initiated) research projects of two to three years. These would be consistent with the projects described in the 2006 documentation under 'researcher-led projects'.
- *Category II:* Practitioner-led (initiated) research projects of one to two years. These would be exploratory and developmental in nature, and would be consistent with the projects in the 2006 documentation under 'practitioner-led projects'.
- *Category III:* Commissioned research projects to realise the collective understandings (syntheses) of the TLRI portfolio of projects; and/or projects that the Advisory Board deems strategically important for advancing the benefits and balance of the TLRI programme

- A balanced TLRI programme arising out of these three categories of research would need to be determined in relation to (i) informing the research literature about teaching and learning; (ii) informing teaching practice; and (iii) advancing the TLRI programme.
- I believe that it is appropriate that the responsibilities of the TLRI management team be broadened to reflect the intellectual leadership that they have demonstrated already, and which has proven to be essential for optimising the initiative. Therefore, I suggest that the contract for the management of the TLRI "formally, to co-ordinate and promote" the TLRI, be extended to include to "formally provide intellectual leadership and development". This expanded role would require an increased budget for the management and leadership of the TLRI. The TLRI Advisory Board should advocate and negotiate the required changes with the Ministry of Education to take effect as soon as possible.

4. Adding value to the TLRI

- Review the documentation and assessment criteria to better reflect the importance of a well detailed and well justified research design that includes a consideration of issues of validity, reliability, generalizability, and how the proposed research will contribute to building knowledge about teaching and learning.
- Review the requirements for the final report so that a rigorous account of the research itself is reported. The final report could be presented in two sections (or two reports prepared): (i) a full report of the research; and (ii) a reflection on how the principles and priorities of the TLRI were realised in the research. While both aspects of reporting are important, it should be signalled that the research itself is of *primary* importance, and how the TLRI principles and priorities were realised is of *secondary* importance. The latter is a means to achieve the former.
- As one of the primary aims of the TLRI is building a cumulative body of knowledge of the linkages between teaching and learning, more attention should be paid to projects which have an explicit/direct focus on this linkage. This would suggest that the TLRI should give a greater emphasis to the *learner* as well as the teacher. Encourage/support research designs that gather evidence of student outcomes of either a qualitative, but more particularly a

quantitative, nature. This would enable a more direct examination of the effect of interventions or changed teaching practices on students' learning.

- Recognise that the TLRI expectations are multifaceted, that is, it has many targets. Identify what is realistic to achieve well at all levels (project level, programme level, management level). Establish the relative precedence of the elements of the TLRI framework.

- Gain a good understanding of the 'big' lessons that have been learned from the collective projects to date (making the connections between projects) and identify significant gaps.

- Use these to provide leverage to, and direction for, future research projects.

- Develop a plan to 'push on' from the research to date—for example, identify excellent projects which have potential for progressing a line of research and invite researchers to continue their research for further depth or breadth; commission syntheses of findings from research to date (as discussed above).

- Introduce peer review of final reports for (i) considering the implications of the findings for practice; (ii) making recommendations for further research and 'pushing on'; and (iii) making suggestions for dissemination. Peer review may be conducted by a pair/team of researchers and practitioners so that both perspectives are incorporated.

- Place a primary focus on the quality of the research design and its potential to generate substantive and robust findings. Review the assessment criteria to reflect this focus.

- Ensure stronger leadership of projects to build research capability as well as ensure high-quality research design and therefore raise the potential for substantive and robust findings. Presently, the TLRI is only building capability 'at the margins'.

- Recognise the 'capability threshold' of teachers in research, and researchers in teaching. Be realistic about the respective roles and strengths that researchers and practitioners can have in a 'collaborative' research project. Work to optimise these, rather than 'force' unnatural, detrimental requirements on a partnership.

- Provide models of research proposals for Category A, B, and C (or I, II, and III) projects.

- Enact a 'dual capability and capacity drive' to spread the development of research capability within tertiary institutions. This could be achieved through research teams bidding for TLRI funds, workshops, and seminars.

- Set expectations for dissemination, for example, practitioners spreading/sharing their experience with colleagues within their school as a minimum, and beyond their school if possible.

- Support Baker and Garvey Berger's suggestion (in press) for "exploratory studies aimed at generating new ways of looking at current ideas and practices with a view to developing alternative and forward-looking understandings of practice".

- Ensure that all projects are led, or mentored, by senior experienced researchers.

- Provide more specific guidelines for dissemination activities that are appropriate at each category level, for different audiences, and for use by researcher and practitioner members.

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Appendix A: Full and summary project reports consulted

Improving tertiary student outcomes in their first year of study. Nick Zepke, Linda Leach, and Tom Prebble.

Whakawhanaungatanga—partnerships in bicultural development in early childhood care and education. Jenny Ritchie.

Enhanced teaching and learning of comprehension in years 5–8: a research / practice collaboration for Mangere schools. Stuart McNaughton.

Making sense of learning at secondary school: an exploration by teachers with students. Ruth G. Kane.

Great expectations: enhancing learning and strengthening teaching in primary schools with diverse student populations through action research. Mary Hill, et al.

Under-three-year-olds in kindergarten: children's experiences and teachers' practices. Judith Duncan and Carmen Dalli.

Mathematics enhancement project: professional development research. Bill Barton and Hannah Bartholomew.

Numeracy and practices change. Glenda Anthony and Margaret Walshaw.

The relationship between English language and mathematics learning for non-native speakers. Phillipa Neville-Barton.

Narrative of beginning Māori teachers: identifying forces that shape the first year of teaching. Paora Stucki.

The art of the matter: development in the Arts. Deborah Fraser.

Enhancing mathematics teaching in early childhood education. Maggie Haynes.

Understanding learning communities in tertiary science and engineering education. Mike Forret and Chris Eames.

Conceptions of assessment and feedback in secondary school mathematics. Elizabeth Peterson and Earl Irving.

Investigating teachers' pedagogical approaches in environmental education. Chris Eames.

Primary students' and teachers' experiences of collaborative learning online. Patsy-Ann Street.

Zeroing in on quality teaching. Christina Harwood.

Investigating responses to diversity in a secondary environment. Lindsey Conner.

A collaborative self-study into the development of critical literacy practices. Susan Sandretto.

Classroom questioning by teachers: an investigation of how teachers formulate, select, and present questions to guide student learning. Linda Bonne and Ruth Pritchard.

Early algebraic thinking: links to numeracy. Chris Linsell.

Appendix B: Summaries consulted of projects not completed

Effective teaching in different cultural contexts: a comparative analysis of language, culture, and pedagogy. Leonie Pihama, Tupeni Baba, and Trish Stoddart.

The Connect.ed action research project. Louise Starkey and Jedd Bartlett.

Who, what, how, and why? Profiles, practices, pedagogies, and self-perception of adult literacy practitioners. Robyn Chandler.

The Classroom InSiTE project. Alister Jones.

Key learning competencies across place and time. Margaret Carr.

The role of initial teacher education and beginning teacher induction in the preparation and retention of New Zealand secondary teachers. Ruth Kane.

Enhanced teaching and learning of comprehension in Years 5–8. Stuart McNaughton.

Understanding learning communities in tertiary science and engineering education. Mike Forret and Chris Eames.

Measuring classroom literacy practice. Judy Parr.

The impact of technology use on the teaching and learning of mathematics in the secondary classroom. Mike Thomas.

Pasifika teachers in secondary education. Tony Brown.

Developing rich mathematical language in Māori immersion classrooms. Tamsin Meaney.

Effective teacher education practice. Valerie Margrain.

Valid and practical tertiary assessment of student learning outcomes. Luanna Meyer.

Unlocking student learning: the impact of teaching and learning enhancement initiatives (TLEIs) on first-year university students. Kogi Naidoo.

Addressing obstacles to success: improving student completion, retention, and achievement in science modules in applied health programmes, with particular attention to Māori. Kelly Gibson-van Marrewijk.

A collaborative self-study into the development and integration of critical literacy practices. Susan Sandretto.

Developing teacher–researcher partnerships to investigate best practices: literacy learning and teaching in the content areas of the secondary school. Trevor McDonald.

A research partnership to enhance capacity to analyse students in writing, using the English Exemplars (2003). Libby Limbrick.

Te Puawaitanga—partnerships with tamariki and whānau in bicultural early childhood care and education. Cheryl Rau and Jenny Ritchie.

Addressing the needs of transient students: a collaborative approach to enhance teaching and learning in an area school. Jude MacArthur and Nancy Higgins.

Enhancing teachers' beliefs, knowledge, and practice about bilingualism and bilingual-immersion education through critical action research. A pilot project (2006). Hayley Read and Donald McLean.

Write on: implementing an evidence, and strengths-based whole-school writing programme for secondary students in order to raise achievement. Ruth Boyask, Kathleen Quinlivan, and Sue Carswell.

Teaching literature in the multicultural classroom. Terry Locke.

Mathematics classrooms: explorations into the teaching/learning nexus. Glenda Anthony and Margaret Walshaw.

Home-based early childhood education (family day care): the visiting teachers' role in improving educators' practices—what makes a difference? Judith Duncan.

Researching understanding of learning and teaching (RULT): a case study in using practice-based research to develop a school-wide learning community. Elaine Mayo and Lindsey Conner.

Success for all: improving Māori and Pasifika student success in degree-level studies. Dr Airini.

A school for the 21st century: researching the impact of changing teacher practice on student learning. Michal Denny.

Strengthening responsive and reciprocal relationships in a Whānau Tangata centre: an action research project. Jeanette Clarkin-Phillips.

Investigating the impact of whole-school approaches to education for sustainability on student learning. Chris Eames.

Teaching and learning in the supervision of Māori doctoral students. Elizabeth McKinley and Barbara Grant.

Mathematics: she'll be write! Tamsin Meaney.

Teachers learning mathematics. Bill Barton and Judy Paterson.

Training on the job—how do home-based co-ordinators support carers to notice, recognise, and respond? Tracey Hooker, Frances Bleaken, and Sue Biggar.

Appendix C:

The TLRI Advisory Board: Interview questions

1. What do you think has been learned from the TLRI since 2003?

2. What do you think have been the most significant benefits of the TLRI?

3. The TLRI places a focus on *building a cumulative body of knowledge about teaching and learning*. To what extent do you think that the body of TLRI projects have achieved this? Why? Why not?

4. In what ways do you think the TLRI may be developed to further advance the building of a cumulative body of knowledge?

5. The TLRI places a focus on *partnerships between teachers and researchers*. To what extent do you think that the TLRI projects that have been undertaken have established successful and mutually beneficial partnerships? Why? Why not?

6. In what ways do you think the TLRI may be developed to further advance effective partnerships?

7. The TLRI places a focus on *building research capability and capacity*. To what extent do you think that TLRI projects have been successful in building research capability and capacity in (i) researchers, and (ii) teachers? Why? Why not?

8. In what ways do you think the TLRI may be developed to further advance capability building for (i) researchers, and (ii) teachers?

9. Do you think there are other important priorities that the TLRI should/could address?

10. What are the major issues (if any) you see at this point for the TLRI? How might they be addressed?

Advisory Board members interviewed:
      Rob McIntosh
      Clive McGee
      Lynne Whitney

Appendix D:

The TLRI: Researchers' perspectives of partnership and research:
Interview questions

1. Who initiated this project?

2. Why did you get involved?

3. What level of research experience did members of your team have before beginning the project?

4. How much, and what type of contribution did you make to:
   - framing the research questions;
   - choice of methodology;
   - writing of the proposal;
   - writing interview questions, surveys etc.;
   - reading and writing towards a literature review;
   - data gathering;
   - data analysis;
   - writing reports; and
   - other dissemination.

5. The TLRI places a focus on *partnerships between teachers and researchers*. What does the idea of 'partnership' mean to you?

6. How well do you think your project fitted your idea of a 'partnership'? What worked well? What didn't work so well? What do you think could have been done differently?

7. What do you think were the benefits of the partnership to (i) the researchers, and (ii) the teachers in the team?

8. How would you describe the effectiveness of your partnership in relation to the goals of the TLRI?

9. The TLRI places a focus on *building research capability and capacity*. How successful do you think your project was in building the research capability of (i) the researchers in the team, and (ii) the teachers in the team?

10. In what ways could the TLRI facilitate greater research capability building for (i) researchers, and (ii) teachers?

11. (If appropriate) In what ways did/does your project impact on your role and responsibilities as an academic?

12. What have you learnt from undertaking the research that you think has contributed to your knowledge of and skills in school-based educational research?

Researchers interviewed:

Mary Hill	Pip Barton	Lindsey Conner
Glenda Anthony	Margaret Walshaw	