

Researching development of national exemplars: impact on teaching and learning

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Introduction

Alongside the development of national curriculum in many nations, concerns have arisen about assessment practices both in the classroom and at national level. To address these concerns, some countries have imposed national testing. For example, the UK implemented national testing for Key Stages 1, 2 and 3. Concerns about the validity and reliability of Key Stage testing used in the UK fuelled ongoing debates about testing and the predominant use of summative assessment practices (Broadfoot, 1996). Tests, like all assessments, can only sample behaviour at a specific period of time, and depending on the scoring schedules, may offer little to the teacher or student as to what has been learned, how much has been learned, or what to do next to improve learning for the student. Compounding these problems have been the variables of classroom testing conditions and teacher judgement (Broadfoot, 1996; Watson, 2000), where misunderstandings about the technicalities of testing have resulted in invalid test results. Dissatisfaction with formal tests has led to a search for new assessment practices and a focus on formative uses of assessment data. Weeden, Winter and Broadfoot (2002, p. 2) maintain that “while assessment practice has improved over the years, teachers could achieve still more if they used the information they gather about pupils’ learning more effectively to plan and teach their lessons.”

The New Zealand Ministry of Education has commissioned numerous reports on the state and direction of assessment in New Zealand education since 1962. A common thread throughout has been the strong links between assessment, quality programmes and the improvement of learning. *Assessment: policy to practice* (Ministry of Education, 1994) particularly emphasised the role of formative assessment as being

integral to teaching and learning. “It provides the student with feedback to enhance learning and to help the teacher understand students’ learning” (p. 8). The Green Paper *Assessment for Success in Primary Schools* (1998) highlighted a gap in the availability of achievement information in the primary years and thus proposed the development of “exemplars of student work referenced to the achievement objectives for all curriculum statements” (Ministry of Education, 1998 p. 19). A preliminary literature review on the development and use of exemplars recommended that the Ministry of Education, “involve teachers at all stages in the development process, use authentic student material and review material on a regular basis” (Peddie, Hattie and Vaughan, 1999, p.1). Freed from the constraints of formal testing, it was hoped that exemplars would encourage more formative assessment practice in schools.

The development of New Zealand national exemplars is an integral part of the Ministry of Education’s assessment initiative (Ministry of Education, 2001). An action research project has accompanied the national development of exemplars since December 2002 and continues into 2003. As well as researching and contributing to the development phase, the research is revealing information about professional development needs of teachers.

Defining exemplars

What are exemplars? According to the New Zealand Ministry of Education (MOE), “An exemplar is an authentic example of student work annotated to illustrate learning, achievement, and quality in relation to the levels described in the relevant national curriculum statement. Each exemplar highlights significant features of that work and important aspects of students’ learning” (MOE, February 2002, p. 1).

Implicit in this definition is a shift away from formal testing conditions to detailed analysis of student work (“highlighting significant features of that work”), evaluation (“quality in relation to the [curriculum] levels”) and focus on indications that learning has occurred (“important aspects of students’ learning”).

The stated purposes of New Zealand national exemplars provide further insight into the form and role of exemplars. According to the Ministry of Education (2002, p. 1) exemplars will:

- “Signal important features of student work to watch for, collect information about, and act on to support growth in learning
- Provide students, teachers and parents with a basis for discussing important qualities, aspects of indicators of learning
- Provide reference points that will support teachers’ professional judgements about the quality of their students’ work.”

The purpose statement clearly illustrates a broadening of the multi-functional role for exemplars. The use of exemplars is exhorted *to focus* teacher attention on *key aspects* of student learning *through observation and action* (implying the role of formative assessment rather than summative assessment of standardised testing). This formative aspect is extended by the *involvement* of students, parents and teachers in *discussing learning* (another contrast from formal testing). Finally, teachers’ professional judgements are deemed to be central to the assessment, teaching and learning process.

Development of exemplars

National exemplars were developed over two years between December 2000 and December 2002. They were developed by seven curriculum teams in English medium education: Mathematics, English, Science, Technology and the Arts (including the four disciplines of visual arts, music, drama and dance), Health and Physical Education, Social Studies, and four curriculum teams in Maori medium education (Te Reo, Pāngarau, Hangarau and Pūtaiao). Curriculum teams were nationally based teams (i.e., they had representatives from throughout New Zealand) of curriculum experts drawn from schools, School Support Services, Colleges of Education, Universities and private providers. Whilst the teams had different models, they essentially worked with schools offering professional development support in order to produce samples of student work. Work samples were moderated at teacher cluster meetings, regional teacher cluster meetings and at curriculum team meetings to select examples that were then annotated in preparation for publication.

As exemplars developed, Advisory Groups provided critique to the curriculum teams.

A part of the development and research programme involved teachers trialling and providing feedback on the draft national exemplars during term one of 2002.

National consultation on draft national exemplars

National consultation methodology

A random sample of 500 schools was invited to participate in the national consultation. A total of 225 schools participated during term one, 2002. Only 12 of these schools were secondary; other secondary schools cited limited time, a focus on NCEA implementation and other prior commitments as reasons for not becoming involved with the national exemplars.

Schools were allocated two curriculum areas in which to trial the exemplars, ensuring that there was an even national coverage of each curriculum area. Facilitation support was offered to 75% of participating schools (from the Assess to Learn team), as a means of supporting the trial and gathering data related to the future professional development needs of teachers in the national implementation of exemplars. In general, the facilitation support provided schools with an explanation of the exemplar development, the general framework and layout of the exemplars, encouragement in trying the exemplars in the classroom, and a vehicle for school-based professional discussions.

During February 2001, researchers visited 10% of participating schools. Observational notes were recorded on staff meeting discussions – the purpose being to monitor the facilitation process, to hear first-hand teacher concerns/experiences of the draft exemplars, to ascertain trends to survey in the questionnaire, to validate data gained from other sources, and to glean professional development needs of teachers. Some of these themes were explored in the teacher interviews as well as the questionnaire.

At the end of the trial phase each school received three copies of a questionnaire. A 90% response rate was achieved with the questionnaires. Facilitators also completed

template sheets after schools visits, to record their observations and teachers' experiences with the draft exemplars. A total of 206 facilitator template sheets contributed to the research database. Data were triangulated amongst the various sources: shadowing observations, teacher interviews, teacher questionnaire, facilitator template sheets, and facilitator interviews.

The Māori medium consultation differed in that there was a much smaller pool of schools. The selection of schools was based on personal and professional networks, knowledge of school programs, and teaching personnel. The school selection process considered: kura kaupapa contexts, immersion Māori classes, school size, location, and school availability. As in the English medium, inherent in this process is the notion of reciprocal benefit, whereby the schools' gain would be in the form of professional development. In all, ten schools received facilitation, and eighteen teachers were interviewed, twelve of whom had used or trialled the exemplars in their classrooms. Twenty eight questionnaires were returned, although most were the result of a group response (of either two or three), including two facilitated focus group discussions. Several other tau-aro-mahi (exemplar) feedback opportunities arose during the consultation period, including interaction with three groups: teachers in a whakapiki i te reo program, (eight teachers), Akatea Māori principals conference, (up to thirty teachers and principals), and teachers who were involved in a Māori literacy development program (eleven teachers). Another rich source of data came from the developers and national coordinators' team meetings.

The focus of the national consultation was twofold: to seek teacher input and feedback on the draft national exemplars, and secondly, to ascertain the likely professional development needs of teachers when the exemplars are distributed nationally. This paper focuses on the impact of exemplars on teaching and learning and the arising professional development needs in terms of teacher curriculum knowledge, learning and teaching strategies, and practices in assessment and pedagogy.

Impact on teaching and learning

During the national consultation phase, observations and reports indicated that exemplars had an impact on teaching and learning in a range of ways. Analysis of the data provided a summary of the tentative and possible impacts.

Teacher expectations of student learning

Feedback from teachers indicated that exemplars helped clarify expectations of achievement within levels (relating to the New Zealand Curriculum Statements in which achievement objectives have been allocated to each of eight levels). Illustration of student work assisted teachers in more confidently making judgements about their own student work.

Great to have these exemplars for assurance of national levels especially when you work in small departments. We have such limited time for effective moderation so these exemplars are really appreciated. (Teacher)

Exemplars also challenged the expectation of some teachers in relation to particular students:

The exemplar pupil sample had a higher level of punctuation than what my pupils use – maybe this is telling me I should teach and expect a higher level? (Teacher)

Curriculum content

The exemplar trials highlighted teacher concerns regarding curriculum content knowledge. While not all teachers expressed concerns related to content knowledge it was noted that teachers' lack of familiarity with curriculum documents and confidence with content was an issue that arose in all curricula associated with the trial exemplars. This was particularly the case for curriculum areas most recently gazetted (i.e., the Arts) and for those areas not taught daily (i.e., Science and Technology, Hangarau and Pūtaiao).

Concerns about content were manifested in various ways. Teachers expressed a lack of confidence with the content of the curriculum as it related to specific exemplars. For example, teachers were confused about the difference between process

(identifying an authentic need, identifying possible solutions) versus product (making a board game) in technology. Other examples included some teachers struggling to understand the more advanced probability concepts associated with Level 4 mathematics exemplars.

Uncertainty related to the language and terminology used in various trial exemplars was a concern of many teachers. For example, for some teachers, surface and deep features associated with children's writing, and related terminology of personal voice was unfamiliar. For teachers working within Maori medium there were additional challenges. Teachers' competency levels in te reo needed for engaging effectively with the exemplars varied across kura. Those who were more competent in te reo, and, or felt confident about teaching in te reo Māori, were generally positive in their feedback about the exemplars. However, a significant proportion of teachers found the density of text, new words and ideas, both time consuming and difficult to access. Teachers tended to rely on the diagrams and conversations as a way of gaining meaning: *For teachers who are second language learners the reo may be a barrier to effective use (teacher).*

Many primary school teachers appeared unfamiliar with the notion of progression of learning (showing increasing sophistication of learning from level one to level five of the New Zealand curriculum), in terms of the development of a concept or curriculum strand. These teachers appeared to be more comfortable teaching 'to a level' and 'within a strand' in terms of content, rather than looking at the 'where from' and 'where to next', and connections between concepts and levels that were promoted in the exemplars. Where curriculum areas had an accompanying matrix, teachers found it easier to identify progressions in student learning.

It was evident that some teachers avoided teaching curricula that were less familiar to them (e.g., dance, visual arts, technology, science, pāngarau, and pūtaiao), as shown by their reluctance to trial exemplars in these areas. Comments such as "*we don't do dance*", or "*I avoid art because I'm only a level one myself*", were not unusual. Many teachers used exemplars as a resource, closely following the suggested planning and teaching. While it is expected that exemplars would not be regarded solely as a 'resource' for planning, it appeared that for some teachers this initial experience

meant that they revisited some curriculum areas or tried new ideas that would have been previously minimised or overlooked. For example, several teachers commented that the exemplars provided them with the support and confidence to teach at least one unit “correctly” that school term with reference to a specific curriculum area. Insufficient content knowledge, issues with language, and lack of familiarity with curricula, seem to have been barriers for some teachers in interpreting the exemplars, and for applying general principles in their teaching, learning and assessment programmes. These issues are common to effective implementation of many innovations.

Learning and Teaching Strategies

Planning

Many teachers commented on the additional teaching ideas they had gained from the exemplars. For example, exemplars provided stimulus material for a unit, a focus for key areas of learning, and a useful planning tool. In particular, teachers reported that the exemplars showed them how to unpack the achievement objectives (contained in the Curriculum Statements), how to construct success criteria for related formative assessment activities, and helped in the planning of ‘where to next’ activities. However, the number of teacher requests for assistance with planning may indicate that there are some in-securities with planning that need to be addressed through professional development.

Questioning

Teachers valued the specific examples of questioning within the teacher-student conversations in the exemplars. The questions modelled ways for teachers to elicit student responses that revealed their learning of underlying concepts and engaged them in further reflection. The highlighting of effective approaches for eliciting focused student responses is supported by research. “More effort must be made in framing questions that are worth asking, i.e., questions which explore issues that are critical to the development of pupil’s understanding” Black, Harrison, Lee, Marshall & Wiliam(2002, p. 7). Questions in relation to phrasing and grammar were especially significant in pāngarau.

Understanding concepts

While some teachers were able to perceive the central concepts being developed within exemplars (e.g., in drama ‘being in role’), other teachers were unable to distinguish the concept from the context. In this particular exemplar, some teachers focused on the context of vets and sick animals rather than developing the key concept of ‘being in role’. Clarke (2001) warns that teachers sometimes confuse students by including context within learning intentions and thus distract students towards the activity and away from the central learning idea are especially relevant. Identifying the underlying concepts and building on them in subsequent learning and teaching is important for progressing learning. “Follow up activities have to be rich, in that they provide opportunities to ensure that meaningful interventions that extend the pupil’s understanding can take place” (Black et al., 2002, p. 7). Where matrices (grid sheets for each curriculum area that summarised significant changes in learning, knowledge, skills, processes or concepts from level one to five of the New Zealand curriculum) were provided teachers were more able to see the links between concepts, contexts, learning experiences and the interventions identified within the specific exemplars. Having made the links explicit, the intent of the exemplars is to illustrate these ideas through examples and modelling of questions, and thereby support teachers’ understanding.

The exemplars alerted us to the importance of good questioning, development of shared criteria and good conferencing to identify next learning steps and helped to break down the curriculum into ‘teaching chunks’ – this has to be positive!

(Teacher)

In order for more teachers to make these connections, attention to competing demands and realities of classrooms needs to be acknowledged and addressed.

Classroom management

Teachers reported that classroom management issues affected their use of exemplars. Difficulties in using the exemplars in the classroom context included the use of exemplars in multi-level classes, the management of individual teacher-student conversations within a class of thirty students (*what are the other twenty nine students expected to be doing?*), the time involved in annotating individual students’ work, management of students simultaneously engaged in a variety of problem-solving

tasks, and the use of a range of materials and resources, such as video equipment. Additionally, suggested learning activities in some exemplars raised potential health and safety issues within the classroom, such as groups of young students using Stanley Knives.

Comments on teacher work load and time issues featured regularly throughout the consultation and development periods. The teachers expressed concern about how they would incorporate such new developments into their planning and teaching. The exemplar trials highlighted classroom management issues that are undermining the confidence of some teachers and restricting their capacity to implement innovative teaching and learning strategies. However, while these are issues for some teachers; the benefits and insights gained for other teachers were perceived to be beneficial.

Assessment Practices

Formative assessment was a significant theme in the assessment related data. Experiences with the draft national exemplars indicated that using exemplars encouraged teachers to engage in more focused discussion with students about their work, provide more specific feedback to students, clarify their expectations and success criteria with students (partly through the provision of models of other student work), pinpoint aspects on which students needed to improve and begin to identify ways of moving students forward.

We didn't know what 'voice' looked like. Our teacher read a few examples of what it 'could be'. We discussed it and then we decided we knew what voice was. (Student)

For some teachers the opportunity to engage students in self-assessment and goal setting appeared to be a completely new challenge and one on which they sought considerable guidance, and practical assistance. When exemplars were used with students there was evidence of raising students' expectations:

Seeing other students' work made it easier because I knew exactly what I was supposed to do and HOW to do it. I like Science more now because I know how to do it and I can learn more. (Student)

Data related to assessment in classrooms, both from the national consultation and development phase, indicate the importance of teachers clarifying the learning task before teaching an activity or lesson. Exemplars reportedly assisted teachers in conveying clear learning intentions, success criteria and focusing student attention on task-related matters (significant themes in formative assessment literature, such as Sadler (1998), Torrance and Pryor (1998), Black et al., (2002). Teacher understanding of self-assessment could be developed through theory, practical strategies to engage students, questioning skills and suggestions for classroom management strategies to free time to interact meaningfully with students on an individual and group basis. Reference to the Ministry of Education web site, TKI, would be a worthwhile starting point for theoretical and practical sources. Sharing of ideas and strategies amongst teaching staff would capitalise on the pockets of teacher expertise in utilising self-assessment strategies.

Implications for professional development

Overall, teachers commented on the need for professional development support to maximise the potential of exemplars in relation to their ability to impact positively on teaching and learning. Exemplars have the potential to:

- Prompt teachers to revisit curriculum documents (e.g., teachers express a lack of familiarity with “*what visual language included*”).
- Clarify the progression of a concept across the levels. This was particularly evident in new areas such as the Arts and Technology where participating teachers needed help with the conceptual framework and assistance of how to adapt exemplars across levels and strands. The development of the matrix that accompanies each set of curricula exemplars was a direct result of the need to clarify the progression and ‘big picture’ in curriculum areas.
- Clarify specific assessment criteria terms associated with curriculum areas (e.g., surface and deep features for writing).
- Expose the importance of language development in a range of curriculum areas. For example, the use of appropriate mathematical language was raised in relation to probability and measurement exemplars.
- Prompt teachers to plan tasks that focus on process (e.g., investigation) as well as content.

- Prompt teachers to more closely attend to the ‘what has been learnt today’ rather than ‘what have I taught today’.
- Provide a rich source of ideas of ‘good teaching resources’ for areas that a teacher may have avoided because of insecurity with content knowledge.
- Support language and curriculum knowledge growth for teachers and students, especially in Māori medium education.

Although many needs in Māori medium are similar to those in English medium, the difference lies within the context, cultural and pedagogical practices.

While the need for focused professional development to ensure successful exemplar implementation in schools is acknowledged, there is also evidence that the exemplars themselves will provide a valuable resource within a wider range of professional development programmes related to general pedagogical practices, assessment, and individual curricula. In relation to pedagogical content knowledge, exemplars can support teachers’ understanding and unpacking of expected learning progressions in order to plan for and guide subsequent student learning. Exemplars, in containing authentic student work situated within learning contexts across a range of levels, provide examples of expected learning progressions, either conceptual or process based.

Exemplars, and their associated matrices, provide a valuable professional development tool to assist teachers in more clearly identifying key ideas associated with each of the curricula, that is, what makes technology a distinctive curriculum from science, for example, as well as a conceptual map that will assist transfer of key concepts from one topic to another topic, or from one context to another. Professional development to assist teachers to develop confidence in progressing student learning through making effective use of the ‘where to next’ section of the exemplars in combination with mapping to matrices and curriculum documents is needed to address concerns expressed by many teachers in the trials.

Unless the context and level of the exemplars exactly matched their class, some teachers struggled to see the relevance of particular exemplars. Professional

development needs to enable teachers to adapt exemplars. For example, the trials indicated that some teachers needed assistance to adapt the theme of the Visual Arts exemplar ‘A strip of Aotearoa’ to a range of possible themes, while still retaining the significant learning ideas of drawing using overlapping. An extension of these ideas for adaptation is the development of teachers’ own classroom or school exemplars, although annotations require in-depth knowledge of a curriculum area and progression of learning.

An exemplar is an annotated work sample. Anyone can produce a work sample.

The value and challenge is in seeing how the sample is annotated, what is recorded, what is behind those comments and to what they are referenced.

(Teacher)

Matrices may provide teachers with a framework for effective annotation of their own students’ work.

To enhance teacher confidence to teach in curriculum areas that are relatively new or in which they feel less capable (e.g., visual arts, dance, drama, putaiao and hangarau) the exemplars can be used as a stimulus of ‘good ideas’ to guide teachers in their planning, teaching and assessment. Transfer of skills and processes across strands and curricula can also be examined; for example, measurement or graphing skills arise in technology, science and mathematics.

The exemplar trials revealed for many teachers a need for re-examination of the teaching, learning and assessment process. Feedback suggested that teachers valued opportunities to examine authentic student work in relation to the curriculum matrix. This process was successful in enabling teachers to differentiate levels of student understanding within the one classroom and to more appropriately design learning experiences to achieve specific learning outcomes rather than select tasks based on their potential to be ‘fun’ or interesting. Some teachers were able to extend these notions with students through engaging them in goal-setting, self-assessment and co-constructing success criteria. Additionally, it will be vitally important for teachers to develop an understanding of the place of exemplars alongside other assessment and learning and teaching tools, such as AsTTLE, in order to effectively manage the range of tools available for assessment purposes.

Conclusion

For teachers involved in the development and trial of national exemplars there has been excitement about the potential impact of exemplars on teaching and learning. In particular, exemplars provide authentic samples of student work that are illustrative of key learning and progression of learning. They provide examples for teachers to make the links between key concepts and rich learning experiences. As such, exemplars can enable teachers to make connections between the curriculum, matrix and student work samples to more accurately assess students' current learning processes and provide direction for subsequent learning.

However, to ensure that the use of exemplars reaches their maximum benefit for teaching and learning, professional development and attention to the numerous barriers in schools, such as time for planning, multiple student needs and modelling of various practices is necessary. Integration of exemplars as a valuable resource within a wide range of professional development programmes is required, particularly those related to assessment and curriculum. A range of professional development approaches will be needed to suit the individual requirements of teachers and schools.

Exemplars represent a radical departure from previous policy and practice, thus challenging some educators' views of education.

“The implicit representation of children is rather like that of industrial raw material awaiting processing and the addition of added value... the assumed passivity of pupils is conveyed by the almost complete absence of any direct account of their perspectives, experiences of quality of life. Education... is something which is done *to* children, not *with* children, and still less *by* children” (Pollard and Filer, 1999: 23).

Exemplars are inclusive of children – their conversations and work samples, and can be used by students to clarify their learning expectations. As an example of formative assessment, exemplars can assist the “formulation of feedback to guide improvement in learning” (Black et al., 2002, p. 21), thereby informing teaching and learning practice, and “empowering pupils to become active learners, taking responsibility for their own learning” (Black et al., 2002:22). Exemplars are designed to explicitly link teaching, learning and assessment, and therefore offer a unique contribution and the potential to impact on teaching and learning in New Zealand.

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