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SCHOOL/CLUSTER BASED SECONDARY QUALIFICATIONS PROFESSIONAL DEVELOPMENT

Review of Secondary Schools' use of NCEA professional development resources, 2005–2006

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Final Report

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Executive Summary

In 2005, the Ministry of Education funded a programme of professional development to support the implementation of Scholarship and the National Certificate of Educational Achievement (NCEA) for the period June 2005 to July 2006. This package of support built on the work of teachers and schools over the previous four years of NCEA implementation and included needs-based professional learning for schools or clusters of schools.

The methodological approach taken to evaluate the school or cluster based NCEA professional development was multi-faceted and utilised several different sources of data. The researchers gathered information from 28 schools, 11 of which were case study schools. The schools were selected to be a representative sample of state and state integrated secondary schools in New Zealand.

The summary of findings is organised into four areas: needs analysis, the nature of professional development programmes, perceptions of changes in schools as a result of the professional development, and ongoing development.

Needs Analysis

Decisions to cluster reflected local contextual influences

Schools across New Zealand were given the autonomy to decide whether to cluster with other schools or to work independently. The principal of each school largely drove the decision and over half the schools in the sample chose to cluster in some way. The decision to cluster and the means by which clustering was organised were determined by a range of influences, specific to the local context. It was more common for teachers of small departments from different schools to cluster together, especially those that comprised a single teacher. In some such cases, a history of clustering precipitated this outcome. Conversely, larger departments were more likely to rely on their own expertise (usually the head of department) to facilitate the professional development and thus inter-school clustering was not experienced. In some contexts, established principal networks and/or pro-active regional advisers from School Support Services were the catalyst for clustering.

Forty percent of schools in the sample did not cluster at any level of their organisation. The reasons for working independently varied. For wharekura, isolation was identified as a barrier to clustering (the distance to travel to cluster with other wharekura). This contrasts with rural schools that made a determined effort to cluster specifically in response to their isolation. Other reasons for not clustering included needs specific to schools being identified, or the links with other schools not being made early enough.

Schools chose when to close for two half days of NCEA professional development. The schools in the research put the two half days together to close for a full day and most (22 out of 28) closed for one day in the first half of 2006, with eleven schools chose to close during March 2006. One school did not close or carry out school wide NCEA professional development.

Four out of the twenty eight schools in the sample appeared to have placed a low priority on organising an NCEA related professional development day. Each of these schools was undergoing change within their senior management team. In light of this finding, it is worth considering how the process of change in senior management teams can be managed to minimise lost opportunities for schools.

School-based decision making was appropriate for this round of professional development

Having the choice of whether to cluster or not, irrespective of their own decision, was seen as an important, timely development in the provision of NCEA professional development. Being involved in professional development that acknowledges and meets their needs was of major importance to teachers in the sample. Ham (2005) reached a similar conclusion: that professional development that gave schools relative autonomy in content and delivery was more successful than specific Ministry of Education directed programmes. Given the high levels of self efficacy towards NCEA assessment reported by teachers, the autonomous approach given for schools to make local decisions at this stage appears to have been received very positively.

Use of the needs analysis toolkit provided by the Ministry of Education varied greatly

Responses from the co-ordinators of professional development about the use of the needs analysis toolkit tended to be polarised, with slightly more schools deciding not to use it than those that did. A small number of high decile schools reported adapting the resource to suit their perceived needs. Wharekura chose not to use the needs analysis toolkit as it was felt that it was not appropriate.

Additional funding was spent on NCEA professional development.

As part of this Ministry of Education initiative, each secondary and composite school was provided with additional financial resources in their July 05 operations grant. The case study schools reported using this money to support the one day professional development day and/ or for ongoing NCEA professional development support over the year.

The Nature of Professional Development Programmes

Schools used internal and external facilitators to deliver professional development

Heads of Department, as subject experts, were heavily used as facilitators irrespective of whether clustering occurred. School support service regional advisors were present at a number of the schools or clusters, sometimes as organisers, often as facilitators and in one instance as participants. Wharekura reported being unable to achieve access to relevant advisors or external expertise. In one case an international educational consultant facilitated part of the professional development. Two other schools involved national educational leaders.

Overall, the teacher ratings and comments about the quality of facilitation were mostly positive; teachers were offered content that met their teaching and assessment needs, and facilitators had a good knowledge of the context and needs of participants. Such a response supports a key characteristic of professional development, as identified in early childhood settings by Mitchell and Cubey (2003), that “professional development

incorporates participants' own aspirations, skills, knowledge and understanding into the learning context".

A few departments within schools had no formal facilitator. In these cases the teachers worked within the department (or alone) catching up on NCEA related activities.

Recent NCEA related professional development was technical in nature

The NCEA professional development programmes carried out on the release day varied, although the majority of schools focused on technical aspects of NCEA assessment for at least part of the day. The technical aspects included: writing assessment tasks; interpreting standards and the criteria for Achieved, Merit and Excellence; marking student work; using or developing exemplars; understanding resubmission procedures; and reviewing amendments to published achievement standards. These findings from the teacher surveys were echoed in the focus groups, which also identified as a focus the mix of unit standards and achievement standards in NCEA programmes.

While professional development activities varied, it is clear that the major focus across schools was on achieving or enhancing assessment skills for NCEA. Many teachers reported focussing on the technical issues rather than the theoretical aspects of implementing standards-based assessment. Such professional development is closely aligned to that directed by the Ministry of Education from 2000 to 2002, prior to the implementation of NCEA.

There is conflicting evidence *vis-à-vis* the readiness of teachers to move beyond the technical nature of NCEA professional development. Firstly, teachers themselves expressed confidence in their ability to assess for NCEA and to assess their first subject area both before and after the recent professional development. Secondly, data from the student survey show that students are very happy with how teachers have prepared them for NCEA and are similarly happy with the advice given by their schools about future NCEA qualifications available to them. On the other hand, it is clear from two schools that focused on boys' learning and Year 9 and 10 programmes that their interpretation of NCEA professional development indicated a considered approach to student learning that, in their local context, may raise student achievement in NCEA. However, most teachers were comfortable taking a technical approach to the NCEA professional development at this stage of implementation.

Perceptions of Changes in Schools as a Result of the Professional Development

Teachers identified their ideas about effective professional development

Teachers in this study identified the characteristics of effective professional development and evaluated their own experiences of NCEA professional development.

Effective professional development was identified as including a strong focus on participants' subject needs, the understanding of such needs by the facilitator, and the engagement of teachers in examining good teaching in their own setting.

The quality of facilitation was identified as a major factor for ensuring successful professional development. Characteristics of effective facilitation include a strong focus on

the needs of participants, understanding of participants' contexts, keeping people focused, and preparing key programme goals and objectives.

Factors identified as contributing positively to NCEA professional development included useful resources (including exemplars, examples of student work, and assessment guides and marking schedules), a focus on the mechanics of assessment, and a curriculum/content focus relevant to teachers. Factors contributing negatively were participant attitude and the timing, location and convenience of the professional development.

While clustering with schools for subject based professional development was identified as the preferred mode of professional development, there was also strong support for school-based programmes. This "dual" pattern suggests the need for those organising professional development to identify the preferences of participants.
There were major variations between schools and the assessment experience of teachers in respect of NCEA. Some differences were also found involving gender, teaching experience, and subjects. Overall these variations point strongly to the need for the designers of professional development programmes to take account of all of these factors—school context, clustering or school based, subject, gender, and the experience of participants—when planning and organising professional activities.

Teachers were positive towards the recent NCEA professional development

Most teachers were at least moderately satisfied with their recent NCEA professional development. While the professional development did not meet their ideal notions of effective professional development, there was still good support for their actual experiences. Where teachers were less satisfied, there was evidence of poor facilitation, including; insufficient subject relevance, and timing/ convenience problems, all factors that had been identified as contributing to ineffective professional development.

Teachers were generally confident about their knowledge and skills in assessing NCEA, and were willing to participate in further professional development.

Ongoing Development

Teachers welcome further professional development

Teachers consistently voiced a desire for further professional development. Survey and focus group data offered an overwhelming call for more opportunities to develop their practice. A common theme that emerged in focus groups was that this professional development represented one step of a longer journey.

Further Scholarship professional development is in strong demand

Scholarship was the focus of learning for less than 5% of the teachers in the survey. This reflected the ratio of teachers who identified Scholarship as a learning need prior to the professional development day. However, school management and teachers in 70% of the case study schools identified the need for further Scholarship professional development in the near future. Smaller schools in particular seem to be grappling with how they can provide Scholarship level learning for their top academic students. Wharekura face similar issues and also expressed concern at the lack of mana and reward given to top scholars in Te Reo Rangatira.

The special characteristic of wharekura impacts on professional development needs

The wharekura highlighted that the small pool of teachers able to teach NCEA subjects through the te reo Māori medium, meant that teachers without experience of NCEA or senior curriculum were often employed. Wharekura have experienced difficulty in accessing qualified advisors for support and needed to adapt the needs analysis toolkit.

Teachers new to New Zealand require further support

Teachers who have experience teaching overseas, but have moved to New Zealand in the past few years, appear to be a group that needs additional support in understanding and implementing NCEA, particularly where they are the only teachers of a senior curriculum area in a school. These teachers appreciated making contact with teachers and advisors beyond their school.

CHAPTER 1

Background

The National Certificate of Educational Achievement (NCEA) was introduced to New Zealand schools progressively between 2002 and 2004. NCEA consists of three qualifications on the national qualifications framework—NCEA level 1, NCEA level 2 and NCEA level 3. They have become the main qualifications gained by 15-19 year olds at school, replacing the norm-referenced systems of School Certificate, Sixth Form Certificate and Bursary.

Students can gain an NCEA qualification through the accumulation of credits at specified levels. Secondary school students (typically years 11-13) undertake assessments during the school year (internal assessments) and exams at the end of the schooling year (external assessments). These assessments measure achievement against either unit standards (pass/fail internal standards, introduced in 1993) or achievement standards (three levels of achievement, internal or external, introduced from 2002). Each unit standard or achievement standard is allocated a set number of credits that the student is awarded when they achieve the prescribed standard. Eighty credits are needed to achieve a National Certificate of Educational Achievement. Scholarship exams were introduced in 2004 to give monetary rewards and recognition to high achieving students at the end of their schooling (NZQA, 2005).

The introduction of NCEA marked a significant change for teachers and schools. Prior to this change, students gained School Certificate and Bursary in specified subjects. They achieved a subject pass through a mixture of exams at the end of the year and internal assessments during the year. Each subject had a prescription, and assessment was carried out in an end of year exam (e.g., Classical Studies), in a mixture of final exam and internal assessments (e.g., Geography) or through internally assessed work only (e.g., Art). Each subject was allocated expected percentage grades, based on historical expectations of national achievement in the particular subject. Based on this 'norm-referencing', students' achievement grades were moderated either through the exam setting and marking process or after results were collated. Scholarship was awarded to the highest achieving Bursary candidates in each subject.

Sixth Form Certificate grades were allocated to schools depending on the results the students at that school had achieved the previous year in School Certificate. Students then competed against each other for the available grades through internal assessments during the year. Schools set their own assessments that were not externally moderated.

The norm referenced system of School Certificate, Sixth Form Certificate and Bursary contrasts with NCEA, which is based around prescribed standards against which students are assessed. In 1991, NZQA signalled a move towards standards based assessment in their report: *Designing the Framework* (New Zealand Qualifications Authority, 1991). From a schooling perspective, the change from norm referencing to assessing against standards has been evolving over time.

By 2000, some teachers were experienced in using standards based assessment practices in their classrooms through the use of unit standards; others were less familiar with the principles and procedures. During the introduction phase of NCEA, teachers spent time becoming familiar with the national standards and the implementation

implications for their classroom assessment practices. The change in the qualification structure and underpinning philosophy had resulted in the need for professional learning and discussion amongst teachers.

Between 2000 and 2003 the Ministry of Education funded professional development workshops for teachers. These were nationally coordinated and regionally based to support the implementation of NCEA and Scholarship. The facilitators were subject experts working with their peers to develop common understanding of the new achievement standards (Fancy, 2000). The professional development typically occurred through one day workshops, when clusters of schools within a region would attend, closing schools for the day.

Secondary school teachers in New Zealand have a history of working with colleagues in different schools. 'Jumbo days' were a regular professional learning experience in many regions in New Zealand prior to 1990. On these days, schools in a region would close, teachers of a subject would get together (cluster) at a particular school to focus on the teaching and learning of their subject. Subject association meetings, professional learning outside school and PPTA gatherings were also clustering occasions when teachers across schools have worked together.

NCEA professional learning days were organised regionally between 2000 and 2003. These sequentially focussed on: NCEA level 1, NCEA level 2, standards based assessment design and NCEA level 3. This professional learning followed a cluster model where a regional cluster of schools closed for the day and the teachers grouped together in their subject area to focus on one of the above topics. Facilitators appointed by the Ministry of Education ran the sessions following a format and using resources prepared by a national facilitator. Professional development workshops were organised through School Support Services as an agent of the Ministry of Education, individual schools and teachers had minimal input into the learning that occurred on these days.

Wharekura across the country engaged in the national cluster professional development facilitated by School Support Services in 2000-2002. This professional learning followed a cluster model where a regional cluster of schools closed for the day and the teachers grouped together in their subject area. This saw wharekura teachers from Māori medium working alongside English medium secondary teachers where the professional development for subjects other than Te Reo Māori/Te Reo Rangatira was facilitated in English. The initial clustered professional development was beneficial for wharekura teachers as it covered the NCEA generic processes and protocols and supported teachers who were new to secondary school assessment procedures.

Wharekura teachers often teach in more than one subject area due to small student numbers. The teachers in wharekura have typically moved into wharekura from teaching in kura teina[1]. This means a new skill set of pedagogical knowledge including assessment and reporting processes and curriculum content is needed. The initial professional development for NCEA was structured so that teachers had to select only one subject area.

The NCEA and Scholarship professional development days have not included support for teachers working in Māori medium and using Māori curriculum and achievement

[1] Māori immersion primary school

standards beyond the Te Reo Māori/ Te Reo Rangitira achievement standards. The support for the use of Māori unit standards has come directly from the Field Māori team and Te Rōpū Tautoko Kura Tuarua from NZQA.

NCEA level 3 and the new Scholarship exam system was fully introduced for the first time in 2004, thus completing the wholesale introduction of NCEA. Throughout the introduction of NCEA, media interest and various reports about problems with the philosophy, implementation, workload generated for teachers, consistency and fairness surfaced (Alison, 2005; Hall, 2005; Hipkins & Vaughan, 2002; Hipkins, Vaughan, Beals & Ferral, 2004, 2005). A PPTA report (Alison, 2005) strongly recommended more professional development for teachers and this recommendation was alluded to in the Learning Curves research reports (Hipkins & Vaughan, 2002; Hipkins, Vaughan, Beals & Ferral, 2004, 2005). The release of the 2004 Scholarship results in 2005 sparked a flurry of media reports as some schools and students were disappointed with the process and their achievements, while teachers reported being ill prepared. The Ministry of Education established a Scholarship Reference Group to investigate Scholarship concerns and make recommendations.

In 2005, the Ministry of Education funded a further programme of professional development to support the implementation of Scholarship and the NCEA for the period June 2005 to July 2006. This package of support built on the work of teachers and schools over the previous four years of NCEA implementation and responded to the recommendations of the Scholarship Reference Group (Scholarship Reference Group, 2005) and other reviews of secondary school qualifications (Alison, 2005; Hipkins, Vaughan, Beals, & Ferral, 2004, 2005).

This professional learning support included:

- regional seminars for principals, Boards of Trustees and staff representatives;
- school or cluster needs based professional learning;
- subject specific teacher workshops for staff representatives from all schools to focus on Scholarship;
- additional (web and print) resources and improved co-ordination of inservice teacher providers;
- research and evaluation to ensure this support package had worked for schools and teachers.

School/cluster based professional development provided an opportunity for schools or clusters of schools to plan and participate in professional development that meets their needs in relation to the implementation of NCEA and Scholarship. This was different from the previous professional development as each school could decide how they would use the resources provided by the Ministry, rather than nationally coordinated workshops. The package to schools included additional funding to each school's operational grants, advisors to help with planning and a starter kit, designed to assist and guide schools to identify their needs, and plan how to use their release time (Appendix A).

Secondary schools in New Zealand have been developing a reflective culture where they examine their professional learning needs annually and this forms part of their planning/ goal setting and reporting to the Ministry of Education. The extent to which schools have adapted to this culture of reflection, professional reading and collaborative learning varies across and within schools.

This report relates to the school/cluster based professional learning component of the above support.

Aim of Study

This evaluation was designed to analyse the school or cluster based NCEA professional development that the Ministry of Education funded between July 2005 and June 2006. The analysis included the following aspects:

- the nature, scope and focus of professional development needs identified in the schools
- how schools or clusters of schools provided professional development
- the effectiveness of the approach taken to the delivery of professional development and
- perceptions of changes in schools as a result of the professional development.

The research aimed to generate useful information for future professional development activities regarding all of the following issues:

- the overall effectiveness of the school/cluster based professional development approach taken to support ongoing implementation and refinement of NCEA and Scholarship;
- the nature of needs identified by schools and the profession;
- the ways in which schools or clusters chose to utilise the additional resources for professional development;
- whether evidence or perceptions support shifts made in teacher practice are associated with various approaches to professional development.

The researchers developed research questions around four themes: The needs analysis, professional learning programmes, perceived outcomes for schools, teachers and students, and ongoing development.

CHAPTER 2

Brief Review of the Literature

Aim and scope of the review

The aim of the literature review for this research is deliberately narrow: *the focus is on the identification of guiding principles that professional development for the NCEA should endeavour to incorporate.* While ideally the review should also focus on research evidence specifically linked to what constitutes successful professional development for the NCEA, the researchers have been unable to locate any studies that have investigated this topic. The researchers have also steered away from literature which focuses more generally on the NCEA, for example, research and commentary on features that are positive and concerns that need addressing (e.g., Alison, 2005). There would also be little point in such a study at this time as it would duplicate aspects of a review commissioned by the Ministry of Education that provides a comprehensive synthesis of published material on the NCEA to date (Brooking, 2006). We are also taking as read that there is no need to report literature in the field of human resources that shows the major value to an organisation of effective professional development. Similarly, there is little point in replicating reviews from the literature on teacher education that show the value added to student learning by quality teaching; the focus for this review is on the supporting role that can be played through well designed professional development and evaluation.

Research Evidence from the Literature on Training and Development

This section briefly summarises findings from a review of the research literature on training and development undertaken by Salas and Cannon-Bowers (2001). The article covers research reported in the previous decade. Its significance for the present review is that many of the findings appear to transfer well to the design of professional development programmes for teachers. The article describes developments in five areas of research: training theories, training needs analyses, antecedent training conditions, training methods and strategies, and post-training conditions. The findings of this review either indicate or reinforce the following key ideas:

- Theory plays an important role in successful training. Those people entrusted with the role of designing and delivering professional development must make conscious their own implicit theories of training and learning and communicate these to participants. In many professional fields, the underlying theoretical basis is an amalgam of philosophies, such as systems theory, adult learning theory (e.g., andragogy), and reflective practice. Unless the tensions between these different conceptions are consciously addressed, there is the risk that participants will sense, if not articulate, inconsistencies in the content and/or processes of the programme.
- Attention to the process of identifying training needs is essential. A range of tools exist for undertaking analyses of needs, but a critical component is the self-assessment of participants of their own needs, and the relevance of the programme for meeting these needs.
- It is also important to address the “antecedent” training conditions. This involves recognising the knowledge, skills and experience that participants bring to the

programme, as well as features of the programme design that will engage participants and maximise the value of the learning for them. Fostering motivation is a key element.

- In respect of training methods and strategies, it is often appropriate to design programmes so that participants work in teams. The research evidence is that working in teams is most effective when the programme is theoretically based, addresses the knowledge, skills and values that are important for the professional development, and gives participants the time and opportunity to interact meaningfully and practise with other team members, including the giving and receiving of constructive peer feedback.
- A key component of effective professional development is the provision of appropriate formative assessment opportunities along with conscious attention to the conditions that are most likely to foster transfer of learning (the literature on transfer of learning is too large to cover here). In addition, evaluation strategies should be designed into the programme so that key aspects of the programme are examined for their impact on learning outcomes.

In respect of the evaluation of professional development programmes, a range of models exist that provide a framework for thinking about the design of evaluation. Two models are particularly worthy of mention: Kirkpatrick's (1976) four-level hierarchy and Kraiger's (2002) decision-based model. The first of these arose from Kirkpatrick's extensive work in the field of training and development—the origins of the model date back to 1959 when he undertook analyses of the approaches being taken to evaluation. Kirkpatrick identified four main sources of evaluation information, which he arranged into a hierarchy: (1) *participant reactions*, such as satisfaction surveys; (2) *learning*, evidence that important principles, facts and techniques have been learnt; (3) *behaviour*, evidence that changes in work behaviour have resulted from the programme; and (4) *results,* evidence that the organisation has benefited through improvements in the quality of its services or products, and/or through improved profits or reduced costs. Kirkpatrick saw little point in obtaining evidence of learning (level 2) if participant reactions were negative (level 1); similarly, he saw little point in studying behaviour change (level 3) if there had been no learning (level 2). There are some obvious parallels between this model and that proposed by Guskey (2000) for professional development in education. The latter identifies five levels: participants' reactions; participants' learning; organisation support and change; participants' use of knowledge and skills; and impact on student learning outcomes.

The Kraiger model starts from the proposition that the fundamental question of evaluation must always be addressed: What do you want to know and why? He distinguishes between the "targets" of the evaluation, the "focus" of the evaluation, and "possible methods". He identifies three main targets: the training content and design; changes to learners; and organisational payoffs. An example of the "focus" of an evaluation would be the quality of the delivery in respect of the first target, or behavioural change in the workplace for the second target. An example of "possible methods" would be course ratings for the first target, or cost-benefit analyses for the third target.

The significance of these models of evaluation—Kirkpatrick's, Guskey's, and Kraiger's—is that they provide a systematic basis for designing and implementing evaluations of professional development. While Guskey's is specifically focused on education, the other two are also capable of being adapted to fit educational contexts.

Evidence from the Professional Development Literature in Education

Black (2000) in his review of the NCEA proposals identified a number of concerns that would need to be addressed if NCEA was to become successful as a school qualification. Apart from a few quite specific technical concerns, such as those dealing with reliability, bias, and interpretations of standards, his focus was less on the "mechanics" of assessment for NCEA and more on the broader issues of the development, including the parity of esteem between vocationally and academically oriented qualifications, student motivation, the principles underpinning standards based assessment, and the influence of changing assessment practices on teaching and learning. He argued that all of these needed debate, monitoring, systematic research, and the provision of professional development. The argument could be made that the attention to date of professional development for NCEA has been more on the "mechanics" of assessment and less on the broader developmental issues. This is understandable in the sense that teachers need to be up and running with the appropriate assessment tools and strategies, however, if the literature from the wider training and development field is of relevance (e.g., that professional development should be underpinned by theory), then it is these wider understandings that should be given at least equal attention. This view is in effect echoed by Nixon (2004) in an interview with an ERO officer and a former regional director of professional development for NCEA—for them the NCEA involves changes not only in the way students are assessed, but also in the way teachers think about education, teaching, learning and knowledge. The principle that underlies this discussion, is that effective professional development must provide the time, space and opportunity for teachers to engage with the "bigger" ideas if they are to embed the operational aspects more effectively into their teaching. Of interest to the present research is the extent to which teachers identify broader concerns as an important focus for their NCEA professional development.

A significant factor in the effectiveness of professional development is the extent and nature of the support provided to teachers following a professional development programme. This point is made by both Twist (2002) in the context of school entry assessment, and Hill, Hawk and Taylor (2001) in a paper on "what makes professional development work". It is also a point strongly made in the literature on training and development.

On a similar theme, DuFour (2004) in the context of a paper on professional learning communities, contends that much professional development is not followed through and therefore not successful. He identifies three "big ideas" for successful professional development: a successful school is one where the staff expect learning success for each student; professional learning communities embrace a culture of collaboration; and professional learning communities are concerned with results for all students. These ideas are seen as values that predispose teachers to positive outcomes from professional development.

An area of growing interest in professional development is the clustering of schools to share ideas, experiences and manage programmes around the common needs of teachers and schools. While systematic research is limited about the benefits of clustering, Ham (2005) studied the effectiveness of clusters within the context of ICT professional development. He listed a number of factors that contribute to successful professional development: the competence of the facilitators, the effectiveness of the programme in addressing the needs of the participants, and the opportunities for

professional sharing and partnership. He also found that between five and 20 schools and fewer than 100 teachers was the optimum size for a cluster, but more important than size was the amount of time available for the group. Effective clusters require the support and active involvement of school leadership as well as ownership by the teachers, and operate on democratic lines so that teachers feel involved in the issues being addressed. Ham also promotes the notion of "fellowship"—the extent to which teachers can learn from each other, the encouragement of a sense of community, and the development of genuine partnerships between teachers from the participating schools. He also found that professional development that gave schools relative autonomy in content and delivery, was more successful than specific Ministry directed programmes.

At the tertiary level, Hall and Kidman (2004) describe an ecological model of teaching and learning that they developed from a synthesis of the professional development literature in higher education along with evidence from their own activities as tertiary level teacher educators. The significance of this model is that it provides an interpretation of learner (student) centredness which argues that "students", "knowledge", and "teacher professional development" must all be the centre of attention if students are to benefit fully from their education. In respect of "students", university teachers need to build rapport with their students through a range of behaviours and interactions (e.g., being accessible, knowing where their students have come from and where they are heading, and linking teaching and learning to the background experiences of students). In respect of "content", teachers must value knowledge and keep abreast of latest developments in their discipline, as well as develop expertise as teachers and researchers. In order to do all of the preceding, teachers must therefore focus on themselves—their own professional development needs—their understanding of course design, teaching, learning, assessment and evaluation, as well as their growth as researchers. A critical element in this conception of professional development is the ability of teachers to self-assess their own strengths and limitations; this ability itself should therefore be a focus of professional development.

The final say in this review goes to Mitchell and Cubey (2003), who provided a best evidence synthesis of characteristics of effective professional development in early childhood settings. The focus of their research was the linking of teacher professional development to enhanced pedagogy and children's learning. The significance of this review is that it identifies eight key features of effective professional development; these features not only capture much of what has been covered in the preceding literature, it also acts as a summary of principles that should guide professional development in other educational contexts, including NCEA.

The key characteristics are:

- *The professional development incorporates participants' own aspirations, skills, knowledge and understanding into the learning context.*
- *The professional development provides theoretical and content knowledge and information about alternative practices.*
- *Participants are involved in investigating pedagogy within their own settings.*
- *Participants analyse data from their own settings. Revelation of discrepant data is a mechanism to invoke revised understanding.*

- *Critical reflection enabling participants to investigate and challenge assumptions and extend their thinking is a core aspect.*
- *Professional development supports educational practice that is inclusive of diverse children, families and whānau.*
- *Professional development helps participants to change educational practice, beliefs, understandings and/or attitudes.*
- *Professional development helps participants to gain awareness of their own thinking, actions, and influence.*

(Mitchell & Cubey, 2003, p. 81)

CHAPTER 3

Methodology

The methodological approach taken to evaluate the school or cluster based NCEA professional development was multi-faceted and utilised several different sources of data. This triangulation of data in particular strengthened the research design and enhanced the credibility of the results and the ability to interpret accurately what those results meant.

The researchers gathered information from 28 schools, eleven of which were case study schools, the remaining 17 schools were termed comparison schools. The schools were selected to be a representative sample of state and integrated secondary schools in New Zealand. All the schools were given two surveys for staff—one prior to the professional development and one after. A sample of year 13 students from the schools was given a survey to complete. The person organising the NCEA professional development at each school was interviewed at the start of 2006 school year to ascertain the progress, plans and pathways that each school was taking towards using this Ministry provided resource.

The researchers conducted focus group interviews at each of the case study schools in addition to the data collection outlined above. This gave an in-depth study of each of the case study schools. The researchers adhered to well-established principles and practices of case study research (Yin, 1994) that included provision for a variety of data sources across the case studies. The focus group interviews and face-to-face interviews with school leaders were carried out after the professional development had been undertaken.

Selection of Schools

A stratified random sample was chosen to represent the demographics of New Zealand's secondary sector. In selecting schools, the researchers aimed to include:

- A range of geographical locations[2] (see Table 3.1)
- Schools with a range of decile ratings[3]
- A range of school sizes, based on the school roll
- Different types of schools including:
  - single sex,
  - co-educational,
  - integrated[4]
  - urban
  - rural[5]
  - wharekura[6]
  - distance education
  - schools using the school closure day before June.

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2 The researchers chose a range of areas of New Zealand to represent diverse populations.

3 Decile 1 schools draw their students from areas of greatest socio-economic disadvantage, decile 10 from areas of least socio-economic disadvantage.

4 A state integrated school is fully funded by the government except for the buildings. These schools have a special 'character', typically a religious based philosophy.

5 Schools based in cities of a population of more than 20,000 were deemed to be city or urban schools. Schools based in towns of less than 20,000 residents were deemed to be town or rural schools.

6 Wharekura are Māori immersion schools, where students learn through Māori language and culture.

An initial list of thirty schools was drawn up and these schools approached to take part. Twenty-one of the schools declined our offer to take part in the research. The reasons for declining the offer included:

- Already committed to other research projects (four schools)
- Plan to close the school for professional development after April 2006 (four schools)
- Staff are too busy and too stressed; coordinator felt he or she couldn't ask them to do more (six schools)
- Did not give a reason (five schools)
- Did not respond to the request, despite numerous contacts (one school).

Of the schools that declined to take part, 17 were large urban schools, one respondent stating "you always target the big schools". The four town or rural schools who declined did so because two were already taking part in major research projects, and two were too busy.

When a school declined the offer to take part in the research, or were unable to take part as they planned to take the professional development day later than April 2006, an alternative school of similar demographic profile was invited. Schools were given the option of withdrawing from the project. One school exercised this option due to workload pressures.

Table 3.1: Geographical location of schools

	Case study	Comparative	Total
Northland	1	2	3
Northshore	1	2	3
Auckland	2	3	5
Waikato/ Bay of Plenty	1	2	3
Hawkes Bay/ East Coast		2	2
Manawatu/ Taranaki/ Wanganui	1	3	4
Wellington	2		2
Christchurch/West Coast	1	2	3
Dunedin/Southland	1	1	2
National provider	1		1

Table 3.2: Demographic summary of participant schools

	Case	Comparison	Total
Boys school	1	2	3
Girls school	1	2	3
Coeducational school	9	13	22
Wharekura	1	2	3
Distance education school	1	0	1
State integrated school	1	2	3
School roll			
<600 students	3	8	11
601-1200 students	3	4	7
1201+ students	5	5	10
Catchment			
Town or rural.	5	6	11
City or urban.	5	11	16
National – urban and rural.	1	0	1
Decile rating			
1 to 3	2	8	10
4 to 7	5	5	10
8 to 10	3	4	7
Not allocated a rating	1	0	1
School type			
Composite (Year 1-15)	4	4	8
Secondary (Years 7-15)		1	1
Secondary (Years 9-15)	7	12	19

Research Questions

The following research questions were developed from the aims of the research.

Needs analysis

- On what basis was the decision to cluster, or not to cluster with other schools made?
- Did schools find the needs analysis tools provided by the Ministry useful, and how did schools think it could be improved?
- How did schools manage the needs analysis process to identify individual teachers, departments and whole-school needs?
- What needs were identified, and were there similarities across subjects, types of schools, geographic areas, teachers of different levels of experience?

Professional learning programmes

- How did schools use the additional funding and school closure time to address needs?
- What personnel and other resources did schools use to facilitate the professional development?
- What topics or areas of focus were addressed in the professional development?
- How did teachers and schools rate the quality of the professional development?
- To what extent did teachers, departments and schools consider their identified needs had been met?

Outcomes for schools, teachers and students

- What changes in school, department, teacher processes and procedures were implemented as a result of the professional development?
- Has the professional development changed teachers' understandings, perceptions and issues related to NCEA and Scholarship implementation?
- What shifts in teacher practice have resulted from the professional development?
- Have there been any shifts related to students' learning and achievement as a result of the professional development?

Ongoing development

- Did schools/clusters plan any follow-up to the professional development?
- Did the process promote or support positive changes to department, school culture and/or links to professionals in other schools?
- Are schools likely to use the needs analysis tools in the future?

Data sources were matched with the research questions to gain the best coverage possible. An outline is included in Appendix B.

Staff Surveys

Information on needs and perceptions of the effectiveness of professional development was gathered through pre-and post-professional development surveys, completed by school personnel involved in NCEA (eg, subject specialist teachers, curriculum leaders, deans and management). The surveys focussed on identified needs, expectations and knowledge needed for effective implementation and refinement of NCEA and Scholarship. Two pilot focus groups with participants from outside the study schools were conducted to help inform the design of the survey, in particular identifying survey content and refining the survey approach. The staff surveys were sent to staff at both the case study and comparative schools. Wharekura chose to have the survey questions in an oral format. Researchers fluent in te reo Māori[7] went to both the case study and comparative wharekura where data were gathered through korero[8].

Schools that had scheduled their professional development after April were not able to be included in the initial study schools, though some schools included in the research rescheduled their days to June 2006 after being selected. The pre-professional development survey (Appendix C) was sent out to schools between November 2005 and February 2006; 2155 surveys were sent out to 25 schools, 670 were returned from 19 schools. The data from the remaining six schools was either not gathered prior to the professional development taking place (2 schools), not gathered (1 school), or the surveys were not received by the researchers (3 schools). The schools which undertook the professional development prior to the survey being administered had not indicated that this would be the case during initial contact. In all, 1690 post-professional development surveys were sent out to the 25 schools between February 2006 and end of May 2006; 449 were returned from 21 schools. The researchers had worked closely with the coordinators in the schools with the aim of maximising the return rate and were understanding of the difficulties that some coordinators faced in persuading staff to complete 'another survey'.

[7] Māori language.
[8] Discussion.

The Statistical Package for the Social Sciences (SPSS) was used to analyse the quantitative data and *Qualitative Software and Research* (QSR) was used for analysing some of the qualitative data.

Case Study School Interviews

Semi structured Interviews were carried out with teachers and other key school personnel at each of the case study schools after they had completed their one day professional development. The focus groups were established by the school coordinators and included teachers from a range of curriculum areas and positions in the schools (from beginning teachers to heads of departments). The questions were sent out in advance. The focus groups were asked five questions:

1. At the recent NCEA professional development, what did you do/learn?
2. How does the recent NCEA professional development compare with previous whole school/cluster NCEA professional development?
3. Do you anticipate any change in student learning or achievement as a result of the recent NCEA professional development?
4. What NCEA or Scholarship professional development learning needs do you currently have and what would be the best way to meet your learning needs?

The research team worked in pairs so that two research team members were on site to conduct each of these focus group interviews, with one researcher acting as facilitator and the second researcher fulfilling the note-taker role. On-site reading back of the notes by the researchers checked the reliability of the recorded information.

The person in each case study school who was identified as the coordinator of this professional development was interviewed by researchers after completion of the professional development. The guiding questions for this interview included:

1. What did your staff focus on at their recent NCEA professional development?
2. How does the recent NCEA professional development compare with previous whole school/cluster NCEA professional development?
3. Has the professional development changed teachers' understandings, perceptions and issues related to NCEA and Scholarship implementation?
4. What changes in the school, department, teacher processes and/or procedures have been implemented as a result of the recent NCEA professional development? (Or will likely be implemented?)
5. Did the process promote or support positive changes to school culture and/or links to professionals in other schools?
6. Is there any planned follow-up to the professional development?
7. Is the school likely to use the needs analysis tools in the future?
8. What NCEA/Scholarship learning needs still exist in your school?

Student Survey

A ***Student Survey*** (Appendix F) was administered in December 2005, immediately following the 2005 NCEA and Scholarship external assessments. The case study and comparative schools were asked to send out the individual surveys and associated information with stamped addressed envelopes to a random sample of year 13 students enrolled for NCEA credits and/or Scholarship, at the end of the examination period. A second round of surveys was conducted in February to account for potential differences in perception caused by the proximity of the exams. These were administered through some of the schools during the school day to aim for a higher return rate than when sent directly to the student who then individually had to mail them to the researchers.

Construction of the student survey reflected input derived from the literature review with a special focus on perceptions and opinions regarding the NCEA and Scholarship processes and developments. The researchers believed that soliciting this input from the students themselves would help to gain an understanding of student perceptions and possible areas where professional development might be focussed in the future.

As with the staff survey, results were analysed using SPSS.

Student Interviews

The researchers conducted follow-up interviews with a randomly selected sub-sample of survey participants from the 2005 year 13 students. These telephone interviews took place in March 2006 after the students had (hopefully) made future study/work choices following completion of NCEA and experienced using their qualification(s).

Focus Group Consultations with Educational Leaders' Advisory Group

An Educational Leaders' Advisory Group (ELAG) provided feedback at critical stages of the evaluation project for the purpose of assisting in the interpretation and analyses of the data and generating recommendations for future professional development practices based on the research findings. The group met in November, 2005 and August 2006. The membership of ELAG included:

Camilla Highfield (Ministry of Education)
Kate Gainsford (PPTA/Practising teacher/school leader)
Jill Ussher (Ministry of Education)
Karl Mutch (advisor)
Winton Clitheroe (advisor)
Michael Johnston (NZQA)

Expert Peer Review

The final report was peer reviewed and validity of methodology and findings were confirmed.

Table 3.3 Research timeline

	2005							2006							
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
Terms of reference															
Survey design															
Focus groups (survey design)															
Pre questionnaire															
School leader phone interview.															
Post questionnaire															
Focus group/ school leader interview (case study schools)															
Student survey 1.															
Student survey 2.															
Student phone interview.															
Analysis of data															
ELAG feedback															
Interim report															
Draft report															
Final report															

CHAPTER 4

Interviews with Schools: Senior Management and Teachers

School Coordinator Interviews

In February 2006, key personnel at 25 schools involved in the research were contacted by phone and asked about their progress in organising or carrying out the NCEA professional development day. The contact person at the schools was usually a deputy principal with responsibility for professional development of staff. In two schools the contact was the principal. The questions they were asked included:

Q1. How has your school chosen to carry out the staff NCEA professional development?

Q2. Describe the process that you went through to decide how to use the Ministry funded professional development day (including any use of needs analysis toolkit).

Q3. What goals/hopes or expectations do you hold for this professional development?

Q4. What learning needs have been identified.

As the interviews were taking place, it became apparent that the fourth question was not able to be answered by most schools coordinators, or was answered in previous questions. Most of the schools were not using the one day until later, in these cases the learning needs had either not been specifically identified or the information was with the head of department or advisory service.

The wharekura in the study were asked these questions in a face-to-face korero following the professional development day. The researchers recognised the importance of building up a strong relationship with the wharekura in order to fairly represent their experiences. Researchers fluent in Te Reo worked with the wharekura.

The key personnel in the case study schools were each interviewed by researchers following the professional development days. In these interviews they were asked:

1. What did your staff focus on at their recent NCEA professional development?
2. How does the recent NCEA professional development compare with previous whole school/cluster professional development?
3. Has the professional development changed teachers' understandings, perceptions and issues related to NCEA and Scholarship implementation?
4. What changes in the school, department, teacher processes and/or procedures have been implemented as a result of the recent NCEA professional development? (or will likely be implemented)
5. Did the process promote or support positive changes to school culture and/or links to professionals in other schools?
6. Is there any planned follow-up to the professional development?
7. Is the school likely to use the needs analysis tools in the future?
8. What NCEA/Scholarship learning needs still exist in your school?
   What would be the best way to meet these needs?

These interviews form the basis of the following findings.

When schools closed

Schools were given permission to close their school for two half days to allow staff to focus on professional learning for NCEA and/or Scholarship. All schools in the study who completed the professional development used the two half days together, closing for a full day. Table 4.1 shows the months that schools chose to close. Two of these schools took a second day in the school holidays during which their staff focused on NCEA professional learning.

Table 4.1: The month schools closed for one day to focus on NCEA professional learning

June 2005	July	Aug	Sept	Oct	Nov	Dec	Jan 2006	Feb	Mar	April	May	Jun	Did not close
1				1	3		1	4	11	2	2	2	1

There were a number of reasons for the choice of timing. Some schools had already set their professional learning programmes for 2005, and felt that the notification of the extra funding was too late in the year to adjust their planned programme. Some schools wanted to carry out the needs analysis and professional learning in the new school year, when there would be new staff members. The school that carried out the professional development in June 2005 had done so before the needs analysis toolkit had been sent out. This was not clear to the researchers until the focus group interviews.

Using the needs analysis toolkit

The Ministry of Education sent out a needs analysis kit that schools could use to identify their learning needs prior to organising their NCEA professional development day. Schools were asked about their use of the needs analysis toolkit during the phone interviews in February. The use varied from adapting the kit to suit the schools needs to being unaware of the needs analysis toolkit. Fifteen schools did not use the needs analysis toolkit, twelve schools did. Overall, coordinators comments about the needs analysis were balanced between positive and negative comments.

Table 4.2: Schools using the needs analysis toolkit

	Didn't look at the needs analysis toolkit	**Decided not to use it**	**Used the needs analysis toolkit.**	**Adapted it**
No decile rating	1	0	0	0
Decile 1-3	2	6	2	0
Decile 4-7	1	2	7	0
Decile 8-10	2	1	1	3
	6	**9**	**10**	**3**

The low decile schools were more likely to have examined the needs analysis toolkit and decided not to use it than the mid and higher decile schools. Three low decile schools stated that they felt the needs analysis toolkit was not appropriate for their school. Three higher decile schools reported adapting it to suit their needs.

All three of the girls' schools in the sample used the needs analysis, two adapting the toolkit to suit their needs. This contrasted with the three boys' schools where in one school the principal used the toolkit and presented his findings to the staff, one school chose not to use needs analysis because they were going to cluster, and the coordinator at the third school was not aware of it.

"we found it quite useful"

"quite an alarming document, that one! It sat on my desk for a while and then I had a read, and I thought 'someone down there is a bit out of touch'. It didn't quite fit the bill, a bit waffly…we didn't use it"

"the needs analysis toolkit was good. It got people thinking."

"same old questions" (school that didn't use it and referred to "a 'constant wall/ alienation' between schools and the powers").

"too long, too wordy"

"I probably biffed it out. If they send something like a survey I do that."

Comments made by the contact person in schools about the needs analysis toolkit

The three wharekura in the sample examined the needs analysis and decided not to use it. One reported that it did not suit their needs at the time, one said that it was not relevant to them, and the third had already identified their professional learning needs prior to receiving the toolkit.

The size of the school did not affect the likelihood of the school using the needs analysis toolkit. However, it is interesting to note that it was only schools of more than 1200 students that reported adapting the needs analysis toolkit before using it.

Schools were just as likely to use the needs analysis toolkit whether they chose to join a cluster or not. Two schools said they did a needs analysis before deciding to cluster while four said they carried it out after the decision to cluster was made. In two regions, the advisors who were involved in organising the professional development day carried out a needs analysis. Three out of the eleven case study schools said that they would use the needs analysis toolkit in the future (or were still using it now).

The schools involved in this research project were alerted to the existence of the needs analysis toolkit through at least two conversations with researchers prior to the professional development taking place. Twenty percent of schools in the sample did not attempt to explore the needs analysis toolkit through antipathy or reported lack of knowledge of its existence. This figure is likely to be higher across schools not involved in this project.

Clustering

NCEA days during the introduction phase (2000-2004) followed a clustering model. This involved schools in a region closing for the day and teachers from different schools meeting with teachers of the same subject at a specific school or venue. The Ministry of Education retained control of the workshop content, while these days were organised regionally by School Support Services, with teachers having minimal advance input into the content or structure.

Schools could chose to cluster or to work on their own for the 2005/6 professional development day. Thirteen of the study schools chose not to cluster and 15 schools chose to cluster. Of the 15 clustering schools, 10 had some departments that chose not to cluster, to work independently of other schools for the day. The smaller departments clustered in the partial cluster (eg. Music, Art), the larger departments did not cluster (e.g., Maths, English). For this reason, smaller schools did not partial cluster as they do not have large departments.

The clustering schools did so with schools in their region. Some schools clustered with schools that they have worked closely with in previous targeted professional learning. Regional clusters varied in size from three schools to over 10 schools. The regions that had a greater number of schools in a cluster had advisors actively involved with the initial plans, one of the largest cluster groups was organised by a principal.

Clustering happened across the decile range, school size and urban/rural mix. Schools that chose to work independently made the decision for different reasons. For one rural school, the travel distance was cited as a reason. For one town school, the relationship with a neighbouring school appeared to play a factor. For three urban schools the reason tended to be based on the decision to have a whole school focus on a particular aspect of professional learning. The three wharekura chose to work independently. They chose this as they felt their learning needs were different, and a whole school focus would be of most benefit. They had clustered with other local schools for previous professional learning opportunities, for both NCEA and other initiatives.

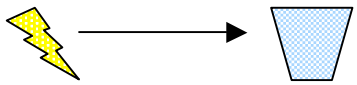
Four schools appeared to have low priority put on organising their professional development day. These schools had changes occurring in senior management staff which may have contributed to them not linking with other schools.

The decision to cluster or not to cluster tended to be driven by the principal of the school. This was sometimes influenced by the regional advisors.

The decision making process each case study school used

Each school was asked to describe the process that they went through to decide how to use the ministry funded professional development day. The following flow charts illustrate the decision making process in each case study school. Each school followed a unique process when deciding how to use the professional learning day. The comparative schools were matched to the case study school that followed the most similar process.

School A.
(Clustered)

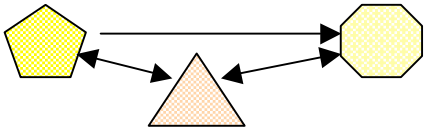


Local Principals met and decided to cluster. The Principal told the staff. Individual departments decided what they wanted to do on the day—whether to cluster or not. The needs analysis was not used in this school.

Five of the comparison schools followed a similar process, two of these schools 'alluded' to the needs analysis, and collated some data on staff learning needs.

Key	Decision makers:
	Principal
	Professional Development Coordinator or Deputy Principal
	Senior management team
	Heads of departments
	Departments
	Whole staff
	Wider community/ parents/ caregivers.
	Cross section of staff
	Advisors

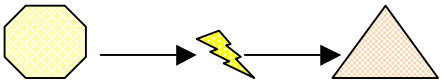
School B.
(Clustered)



The senior management team met twice and consulted advisors. The staff were informed of the decision. Advisors emailed out a learning needs grid to all teachers. They clustered; this was organized by the advisors.

Four of the comparison schools followed a similar path to school B. The advisors were involved in initiating the day, they all used the needs analysis and departments and/or the whole staff had input into the day (depending on the size of the school).

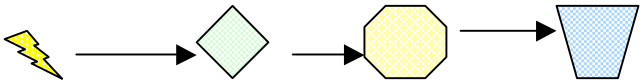
School C.
(Clustered)



This school used the needs analysis kit with the whole staff. The Principal then took the results to a Principals' association meeting, where they decided together to cluster. The local advisory group was used to organize the day.

One comparison school followed a similar process. It did not use needs analysis, but the principal and the staff worked with the advisors to organize the day.

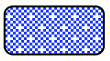
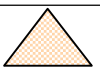
School D.
(Clustered)

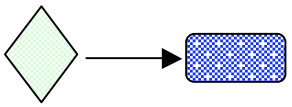


The principals of the region decided how they would use the day. The coordinator adapted the needs analysis kit for their own school and consulted staff. As a result of this the departments could opt to join the cluster or work in their own department.

School E.
(Clustered)

The staff told the principal when they would like the day. This was taken to a principals' group meeting. HODs gave their staff a questionnaire about the format of the day. The advisors helped set up the day, larger departments stayed in school, smaller departments clustered with schools of similar character.

Key	Decision makers:
	Principal
	Professional Development Coordinator or Deputy Principal
	Senior management team
	Heads of departments
	Departments
	Whole staff
	Wider community/ parents/ caregivers.
	Cross section of staff
	Advisors

School F.
(worked independently) 

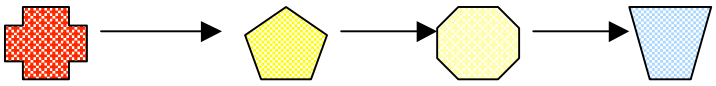
The deputy principal met with heads of departments. The heads of departments decided they would spend time as departments, so each department worked in their own area.

School G. 
(worked independently or has yet to complete professional development)

The senior management team had discussed what they might do. It didn't get beyond this stage. This round of professional development had not been carried out by the end of June 2006.

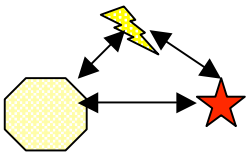
One of the comparison schools appears to have the same pattern. The professional development did not get past the senior management discussion stage until May, with the school closing for a day in June.

Three other comparison schools had the senior management team or one of the team deciding on the professional development and organizing it independently, apparently without consultation or direct needs analysis.

School H.
(worked independently) 

A cross section of teachers looked at the needs analysis toolkit as a starting point. Their findings were taken to the senior management group who put together a proposal and discussed this with the staff. Departments then developed their own plan for half the day.

This school stood out in the post-professional development questionnaire, where 60% of the surveyed teachers reported that the NCEA day did not improve their knowledge of how to assess for NCEA (37% of teachers in the other schools reported this).

School I.
(worked independently) 

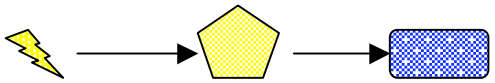
The principal, staff and school community met together and jointly decided how to use the day and who could facilitate the learning.

School J.
(worked independently)

Each staff member did a needs analysis. Heads of departments then developed the day to meet their department's needs.

One comparison school followed a similar process.

School K.
(worked independently)



The principal talked about the day with the senior management team. The senior management team used the needs analysis kit to identify school needs. The heads of department designed a plan for the day.

Two comparative schools followed a similar mode, where the principal worked with the staff to develop ideas and a plan for the day. These two schools did not involve heads of departments (both were small schools).

Schools that clustered

The coordinator or principal of each case study school was asked what the staff focused on at their recent NCEA professional development day.
Two of the case study schools reported clustering with regional schools with all teachers who taught NCEA attending. These schools were small in size. Both of these schools had all their staff travel to a specific venue. At one of the cluster meetings all the teachers were together in the morning for a workshop with a guest facilitator/presenter. This focussed on where education is heading in the future. After lunch the teachers grouped in subject areas to examine NCEA. The other cluster meeting was arranged so that staff could attend two curriculum areas, one in the morning, another in the afternoon.

Three of the case study schools were involved in partial clusters, with the smaller departments going to the cluster groups and larger departments staying at school, working as a department. One of these clustered with two other schools in the same city, one clustered with schools with a similar characteristic and one clustered with the region's schools. The departments that did not cluster self-selected their focus of the day.

Schools that worked independently

Six of the case study schools chose to work independently. The first of these schools focused on understanding policies and translating a school based policy to department policies. Everyone in the school worked together at the start of the day to examine school wide policies. They later split into departments or faculties—each group having at least six or seven people. These groups sometimes included more than one subject area.

Another case study school followed a similar pathway. The whole staff worked together in the morning, focussing on processes such as internal administration for reporting results to NZQA. In the afternoon the school split into groups. Each group looked at different aspects of NCEA such as comparing NCEA criteria in different subjects or how they could use asTTle tools.

The third school that did not cluster had each of the subject areas working on NCEA independently for most of the day. Between 11am and 12.30 all the staff went to a presentation on the use of SMART Boards[9]. There was a one hour session on how to use KAMAR[10] at the start of the day for heads of departments.

The focus of the day at the fourth school was to look at formative assessment. This school already has a focus on formative assessment and the principal used the days to '*enforce'* (sic) this. A consultant spent half of the first day with managers on using asTTle[11]. The other teachers worked in their department. A *good thing about the day was that departments could do what was needed.* The second day focused on asTTle and KAMAR. The principal reported that the days *"loosely related to NCEA as we interpreted it as ways to enhance student achievement".*

The fifth school that worked independently started their day with a general session which outlined the areas needed to be worked on, then spent the day in departments. Each department was required to present to the principal an outline of what they wanted to achieve on that day.

One school had not yet used the funding for the NCEA professional development. This school had planned to analyse achievement data, external against internal achievement and external formative assessments against summative results. They had indicated that they would develop school based teacher professional learning associated with the findings. This had not happened by the end of June 2006.

Comparison with previous NCEA professional development

The coordinators/principals were asked to compare this round of NCEA professional learning with those of past years. Most noted that it was very different, focussing on local needs. One coordinator reported that not all staff had such a good experience, with some arriving at a venue and finding they were expected to facilitate the day. Reflections on the day included 'teachers were more part of driving professional development rather than being lectured to', 'more reflection', 'allowed teachers to focus on what they thought was important'.

> *Previous PD we were absorbed by the urban giant of (*the nearest city*). This time we clustered with other rural schools.*
> **Principal, rural school**

Changes as a result of the professional development day

The principals or coordinators of the case study schools were asked if they anticipated any changes to processes, school culture or teacher understanding as a result of the day. The responses varied. One noted that "some still hate NCEA". Another noted "the realisation that we are all in this together" and a third reported "we are past arguing about NCEA for the first time". Two alluded to this being a step in a process of developing a shift in thinking. For example, one coordinator reported that one HOD was making a change from an attitude of more assessment being better to meeting student needs.

> *Teachers looked at their students' data, and thought about their practice in light of this evidence.*
> **Co-ordinator talking about change in understanding**

[9] Interactive whiteboards.
[10] A student data management system.
[11] asTTle stands for Assessment Tools for Teaching and Learning (He Pūnaha Aromatawai mō te Whakaako me te Ako).

Where a school had a certain focus, the coordinator or principal tended to be optimistic that a change to understanding or processes would result.

No changes in understanding of Scholarship were reported.

Follow-up

Four of the case study schools planned or had already carried out a second professional development day. The focus of the second days included a focus on questions provided in the toolkit and linking thinking skills to higher order synthesis as required in NCEA.

Continuing and building contact with other isolated teachers was planned as a result of the clustering for one of the schools. This contact would be via email and school visits.

One of the case study schools planned to have follow-up department meetings to look at their literacy strategy. They had identified a strong correlation between literacy capabilities and NCEA achievement. Another school principal wanted the teacher appraisal process to be linked to achievement data, believing that professional teaching decisions need to be based on assessment information.

The perceived rise in local crime and the resulting damage to the relationship with the community, during teacher only days, were cited as reasons that one of the schools was reluctant to have more days when the school was closed. Another case study school mentioned that the school's programme of professional development would continue, but NCEA was not the focus of this development at the moment.

None of the case study schools mentioned follow-up with professional learning about Scholarship, though this was a recognised need within most of the schools.

NCEA and Scholarship learning needs that are yet to be met

Coordinators/principals of the case study schools were asked to outline what NCEA or Scholarship learning needs they felt they still had.

Professional development in the area of Scholarship was mentioned by seven of the 11 case study schools. The type of needs identified included:

- how we can meet Scholarship students' learning needs
- how we can best support our Scholarship students
- how do we prepare students for Scholarship without having extra classes or outside tuition?
- how we interpret descriptors, how we use the marks system rather than standards system
- help deciding who should be attempting Scholarship.

Suggestions made for meeting these learning needs included:

- more examples of the types of questions in Scholarship
- models and exemplars of student work at Scholarship level
- having access to material rather than producing their own
- advisor help and support
- working within the cluster, clustering the students with one teacher expert within the cluster
- good quality moderated resources being available. Like the ones CETA produces

- the regional university running Scholarship workshops
- targeted funding of NCEA professional development within school professional development budgets.

One school mentioned that most of the professional development budget goes on NCEA.

The case study schools identified some learning needs that tended to be unique to their individual situation.

- One small rural school said that they would like to be able to help their students succeed with level 2 NCEA. They currently buy NCEA 2 teaching through the videoconference network. They would like to develop teacher confidence to offer some level 2 teaching onsite.
- A low decile urban school would like help in making the world of NCEA accessible for their students. They plan to focus on the vocabulary needed to succeed in NCEA assessments, and want to develop study skills for their students.
- Help with assessment tasks that have failed moderation was identified as a need in two schools. The current system of getting feedback without being able to resubmit or getting advice and guidance was seen as frustrating.
- Differentiating assessments and programmes is a focus in one school, which would like to cater better for the needs of gifted and talented students.

Other learning needs identified are more generic such as developing critical theory professional learning, particularly for level 3 and Scholarship teachers. Two schools identified new teachers to New Zealand as needing NCEA professional learning opportunities, as it can be a “steep learning curve”.

Suggestions for meeting NCEA learning needs included:

- more time and money
- giving the heads of departments the time they need to be NCEA leaders
- opportunity to talk to other schools to facilitate the dissemination of good ideas. It is done through subject associations, but it would be good to have national support for this
- meeting with local cluster schools to share the good things that are being developed
- subject specific professional development
- cluster every 3 or 4 years
- one day a year funded cluster meeting
- from an organizational perspective, centrally organized cluster days were much easier.

One school had developed a think-tank to look at how to improve achievement rates. They aim to get 100% success in literacy and numeracy at level 1.

Spending the additional funding

As part of this Ministry of Education initiative, each secondary and area school was provided with extra resources in their July 05 operations grant to meet the costs of carrying out this school or cluster based professional development. As part of this funding each case study school received between $800 and $4,500 depending on the size of their school role and their relative geographical isolation.

The coordinators from the case study schools were asked how their school spent the extra resource that had been received. The money was used for:-

A. Supporting the school or cluster based professional development day or follow up days.
- Travel on the NCEA professional development day to get to and from cluster meetings (two schools)
- Relief costs where a composite school did not close for the NCEA professional development day. (one school)
- Guest speakers (eg. A speaker from Australia on thinking skills) (two schools)

B. Ongoing support for NCEA professional learning.
- Ongoing NCEA professional development (including course registration, travel and relief teacher payments) (Three schools)
- Release costs (relief teacher payments) to allow teachers to visit other schools, or work collaboratively within a school. (Five schools)
- Department resources (Money divided up and given to departments to use for resourcing). (Two schools)

Most of the case study schools used the money for more than one purpose, relevant to the professional development One case study school did not tell the researchers how the money they received had been used.

Teacher focus groups—what the teachers said

Two researchers went to each of the case study schools where they conducted focus group interviews with a cross section of teaching staff. These interviews were conducted between April and June, 2006. The teachers taking part were organised by the contact person within each of the schools. Most schools included staff across the school from different departments and different roles and hierarchical positions. Researchers fluent in te reo liaised with the wharekura.

The questions asked included:

1. At the recent NCEA professional development, what did you do/learn?
2. How does the recent NCEA professional development compare with previous whole school/cluster professional development?
3. What changes in understandings about NCEA or Scholarship or teaching practice do you have as a result of the recent NCEA professional development?
4. Do you anticipate any change in student learning or achievement as a result of the recent NCEA professional development?
5. What NCEA professional development learning needs do you currently have and what would be the best way to meet your learning needs?
6. Anything else that you would like to say about NCEA/Scholarship professional development?

The school that had not carried out the professional development was only asked about their current learning needs.

What the schools focused on

A focus group of staff who had attended the NCEA professional development day was interviewed in each of the case study schools. They were asked about their experiences on the day that the school was closed.

Schools that clustered

Two of the case study schools clustered with regional schools with all teachers of students in year 11 and above attending. These schools were small in size. Both of these schools had all their staff travel to a specific venue.

> *It was quite cool, just from one talk we came back and had all these ideas, people were saying all those wicked things. Bigger picture stuff, rather than nuts and bolts of NCEA.*
> **Teacher about the morning session**

School C teachers travelled together in a bus to the venue. The bus trip was enjoyable as it gave the teachers a chance to catch up with one another. All the teachers of the cluster schools were together in the morning for a workshop with a guest facilitator/presenter, a leading New Zealand education professor. This focussed on where education is heading in the future, the idea of a community of resources. After lunch (which was supplied) the teachers grouped in subject areas to examine NCEA.

> *Everyone went away with new knowledge directly linked to NCEA*
> **Science teacher**

The subject groups looked at the new curriculum statements, talked about external moderation, assessments and shared ideas. The English group split into focus groups with one looking at Scholarship. This group of teachers was positive about their experience and valued making connections with colleagues in other schools.

> *compared to jumbo days, this was fabulous.*
> **English teacher**

The teachers at School C noted the friendly atmosphere, compared to the earlier professional development days when "*the fights were awful*". One noted that teachers had to have those earlier days to get a grounding in NCEA. The teachers spoke positively about the links with other teachers in the same subject, meeting the teachers who are involved with teaching their students online and found it reassuring that they were doing fairly similar things in NCEA.

The English subject teacher thought the day would impact positively on her students as she changed her focus in teaching to ensure that specific students succeed in gaining reading and writing credits. Another teacher wanted to change the focus from '*credit farming'*.

A teacher new to New Zealand found the day really useful.

> *It was a complete waste of time*
> **Computing teacher**

School B also had all the teachers attending an NCEA cluster meeting, but appeared to have a very different experience. The day was organised so that teachers could attend two different subject areas, one in the morning and one in the afternoon. The activities included; looking at samples of student work, exploring the use of unit standards, looking at assessment materials, and moderation. The teachers were mainly negative about their experience. Complaints included: repetition in the two sessions, arriving and no facilitator present, cancelled subject (teachers arrived to be told there was nothing for that subject), information not suited to the needs of a new teacher, teachers leaving at lunch time, and people within a group who dominated discussions. One teacher found the day useful. She was a new

teacher to New Zealand and was pleased to meet with other people teaching in the same area as her. A head of department gave her useful resources.

Only one teacher at School B had experienced the previous professional development days. She thought the previous ones were better as they had a lot more material. This group did not think there had been any changes in understanding as a result of the day, except the idea of using unit standards in Accounting, which may improve student achievement. A second year teacher felt he was more confused at the end of the day than he had been before it. This focus group was generally negative about NCEA and this professional development day.

Schools that had smaller departments clustering, larger departments staying at school

Three of the case study schools were involved in clusters, with some departments going to the cluster groups and other departments staying at school, working as a department. One of these clustered with two other schools in the same city, one clustered with schools with a similar characteristic and one clustered with the region's schools. The departments that worked independently self-selected the focus of the day.

School E's smaller departments clustered with schools of similar characteristic. The teachers spent the whole day with the group.

> *The day was brilliant. The art teachers in (this cluster group) used to meet regularly, but we haven't done this, the day has started this again.*
> **Art teacher**

The Music teacher found clustering beneficial as she was new at the school and had been working on her own. The facilitator had started the day by asking what the teachers wanted clarified and by the end of the day most had been clarified. The idea of entry restrictions to NCEA classes will be brought into the school for the following year's music classes. There will be an NCEA class for students with prior learning, and a class for students without adequate background.
The Visual Arts cluster examined changes to the standards and samples of student work and portfolios at level 3. The Art teacher felt enlightened after the day as he came to the realisation that excellence at level 3 meant the thought process rather than the skills; he reported that this will impact on the way he teaches.

The Maths department stayed at the school where they analysed the school wide achievement of students over a number of years. They then looked at ways to modify their courses. They reduced the number of external standards and increased the internal and unit standards. They would like to focus on ways to further differentiate instruction in the future.

English teachers were based at the school looking at achievement data. Where they found there were areas needing attention, they shared strategies that may help to improve their teaching in that area.

> *NCEA training days had a negative connotation and I didn't always go with an open mind. Once you are in the water you don't feel the cold.*
> **Maths teacher**

At the start of the day the Social Science head of department asked the teachers what they wanted to do on the day. Social Science teachers looked at how they could develop their own resources rather than using the ones off the web. They looked at moderation policies in the department and check marking. In the afternoon they worked on developing their own assessments. This day was appreciated by this department as

there are eight different staff, many working in multiple departments and only two of the teachers are full time, so it is difficult to have time when all these staff members can be together to discuss professional matters.

The School E teachers in this focus group felt positive about the NCEA professional development day. They felt that the day was tailored to their needs. They could focus on the needs of their students, as the character of their students is different to other schools. One teacher reported that they were all talking the same language now, which made it easier to identify their problems and for facilitators to help with solutions. There was a reservation expressed over the need to be talking with different schools to keep the standard as a national standard.

These are national standards so even though we may meet with our cluster, we need to also meet with other types of schools to keep it as a national standard.
Head of department

The teachers identified further learning needs including:

- days for moderation (some subjects use internal moderation as a way of overcoming the need to change wording and terms in the external assessments. Changing vocabulary confuses the second language learners and other students with low levels of literacy).
- ongoing cluster meetings to look at tweaking to the standards, and exchanging teaching ideas.
- a year 1 teacher reported that she needs to learn how to teach literacy skills to enable them to succeed in NCEA. She noted this was missing from her preservice training and first year teacher professional development.

School D had most departments choosing to cluster with colleagues from other schools. The English department stayed at school. The teachers of Technology, Languages, Science and Te Reo Māori clustered with other regional schools.
School D Technology teachers clustered for the morning where they looked at sample assessments and marking schedules. The day was run by teachers who had been markers in 2005. In the afternoon they went back to their school and looked at achievement objectives for reporting. The teacher at the focus group interview was disappointed with the lack of student work (particularly level 3 excellence), assessments and explanations from moderation available for Technology. She reported that she liked this day better than previous NCEA days. Previous days were generic technology whereas this day was subject specific. There are few schools assessing against the Technology standards, therefore the teacher believes further discussions are needed and questions to be answered.

The Languages spent the day networking with other teachers. They looked at using computer software to record orals. This part of the day was not useful to the Language teacher as she already knew how to do this. Changes to the speaking achievement standard were looked at and the teacher reported inconsistencies between ways schools are assessing this. Overall, the day was useful and the teacher felt NCEA is a lot clearer.

I would like *"more resources—I work harder now than when I was a first year teacher".*
HOD science

The Science teachers had a huge range of workshops available for them to attend. The department sent staff strategically to different

ones. The day was not totally focussed on NCEA, there was a range of workshops. The teacher in the focus group went to a workshop on Senior Science.

The English department stayed on-site and focussed on unit standards. They developed exemplars from student work so that students could see what achieving the standard looked like. By the end of the day they had good useable exemplars, which should result in greater achievement and consistency in marking in the future. They now want to focus on achieving a balance between assessment and learning and making learning interesting. A challenge they identified is moving students away from being so credit driven.

The teachers from School D would like:

- more information on Scholarship
- support for unit standards
- support for smaller subjects
- TKI site updated
- more resources—"I work harder now than when I was a first year teacher"
- chunks of time like a day to work on writing resources.

School A was the third case study school that partially clustered. It seemed to have more departments staying at school working independently than the previous two.

The maths department stayed on-site and focussed on moderation for impending level 1 and 2 assessments. A facilitator explored the senior numeracy project as the school is considering a pilot—there has been a problem getting algebra and number grades at level 1. Two staff members spent time during the day giving feedback on the cooperative learning professional development they had attended. Maths could have joined professional development opportunities for Scholarship through the university, but their budget would not allow for it.

The Science department spent the first hour working on individual administration around NCEA. The Science advisor then worked with the department, looking at TKI resources and information relating to integrating strands for science and the new draft curriculum. In the afternoon a member of the department ran a seminar on teaching and temperament. The department had wanted to set up interschool professional development but had met with resistance.

The Geography department (two members) based themselves at their own school where they evaluated and made changes to their field trip for NCEA level 3; they also did "*filing and boxing*". Two weeks after the professional development they had written eight new assessments directly as a result of the one day professional development.
English discussed individual approaches and resources that they use in the classroom, alternative and core programmes. They evaluated programmes and modified them as a result. They developed a shared file system on the computer.

Music and Drama teachers clustered and had an advisor as the facilitator. They discussed common problems and solutions and the use of ICT for compositions. A network of drama teachers was established as a result of this day.

Physical Education and Health spent the day on moderation and filing. The moderation was reportedly helpful to a second year teacher and overseas teacher. The cost per teacher of joining the cluster ($120) means that the school has not joined the subject cluster, it is the only school in the region that is not part of the cluster.

Contestability takes us away from a model of collaboration. Clustering is the answer for Scholarship students.
Science teacher

Teachers in the School A focus group reported that they do not have enough students to run Scholarship classes, so teachers had to offer their own time. Collaboration across schools was discussed as a way of sharing teachers with the necessary 300 level papers. This was seen as potentially difficult to initiate in a region with a competitive schooling model perpetuated by league tables.

The teachers discussed the lack of funding available at this school for teachers to attend NCEA and Scholarship professional development being held at the University. One teacher noted that "*while the advisory service is free, the resources from the advisory clusters are not".*

Schools working independently

Five of the case study schools chose to work independently in their own schools.

School H focused on understanding policies and translating a school based policy to department policies. Everyone in the school worked together at the start of the day to examine school wide policies. They later split into departments or faculties.

The Art department worked on level 1-4 of the Art curriculum, aiming to ensure that teaching is relevant and appropriate. This department identified Scholarship as an area that they need further help with.

Maths looked at changes in versions and checked that changes were incorporated into the teaching and assessment.

English evaluated how the school had achieved in the different standards last year in NCEA, then modified programmes. For example, they introduced unit standards in one unit, and brought in essay writing skills as a focus for year 9 students. They discussed how to implement some of the standards to be in line with what other schools are doing (to make it fair for their students).

Previous days were settling in—this day allowed us to work with it and reflect.
Teacher

Art History has new achievement standards for level 3. The teachers went through and reworked the internals to match the standards. They found it difficult to find the versions and updates. They would like to have a complete resource for Scholarship.
Science worked on implementing changes to level 3 standards. They would have liked to have had the day after the results for 2006 were published.

One of the teachers at the focus group interview had spent the day working on the timetable.

It must have been beneficial to the students as we had time to ensure everyone was beating to the same drum.
Teacher

The teachers at School H expressed concern at the difficulty they face in finding out about the changes to standards, and the late notification. They do not always see the paper copy that is sent out to the school notifying of change, and do not always notice changes on the web. They tend to get information from advisors and teacher contacts in other schools. One of the advisors always checks that one of the subject areas has picked up on the changes to standards. This focus group liked the fact that this professional development was school based, though they did note that it would have been good to have cluster groups organised and funded.

There was discussion in this focus group that reflected a frustration over inconsistencies in marking, moderation and assessment conditions across schools. Two teachers said they wanted percentage grades brought back. One of these teachers did mention that they liked the holistic marking approach used in Media Studies.

School F had each of the subject areas working on NCEA independently for most of the day. Between 11am and 12.30 all the staff went to a presentation on the use of SMART Boards. There was a one hour professional development on how to use KAMAR at the start of the day for heads of departments. During this day the History teacher worked by himself working on a level 3 assessment which was due for moderation and marking. He reported this as being valuable even though he could have done this at home on a Saturday.

The English department spent some time preparing for upcoming assessments. They also decided what reporting they would do for student reports, using their KAMAR system. They then looked at the link between year 10 and 11 assessment and did some cross marking with models. The teachers of NCEA level 3 looked at possibilities for reassessment. The department has a first year teacher who helped in finding out about assessment at levels she is not currently teaching.

School J chose to focus on formative assessment. A consultant spent half of the first day with managers on using asTTle. The other teachers worked in their department.

The Technology department spent the afternoon putting the moderation plan in place. The English department had already been using asTTle so did not find the morning session relevant.

Commerce spent the afternoon looking at NCEA assessments to use in 2006.

Visual Arts teachers looked at their own assessments and their assessment plan for 2006. They looked at how to do diagnostic assessment and how to use assessment data.

The teachers reported that the smaller departments would have liked to have clustered, but they did not know it was an option as they were not consulted. Like another case study school, this school reported that there was a lack of funding to allow the teachers to attend ongoing NCEA professional development.

I thought a student's photography folio was excellence and she got a not achieved (in moderation)—no explanation as to why.
Art teacher

One teacher noted that the day was useful "*it gave me tools to adequately measure one year from another year—that's not connected to NCEA results. It gave me new valid measures for student progress*."

School J raised concerns about NCEA, including:

- upskilling teachers new to New Zealand
- notifying of changes to standards "*you just stumble across them"*
- timing of changes to standards
- university entry criteria unclear
- apparent random moderation decisions
- explaining moderation decisions
- Scholarship—we need exemplars.

School I teachers worked together as a whole school in the morning to look at internal and external credit allocation across the areas of Maths, English, Te Reo Māori, and Te Waharoa (Field Māori) to look at comparisons and options for their teaching programme. The morning was also spent looking at the asTTle learning tool, in particular the areas of Tuhituhi, Pānui, and Pāngarau.

The learning areas spent time in the afternoon completing administration tasks and preparation for impending assessments and learning contexts.

The teachers in the focus group thought the day went well. It gave them time to catch up on administration, examine ways of improving teaching programmes and supporting students as they move into tertiary study.

The teachers identified areas that they would like further professional development including:

- the use and development of templates, frameworks, and options around Te Waharoa (Field Māori, unit standards)
- Kia huitahi ngā Pouako ki te rongo i ngā whakawhanaketanga (changes, additions or amendments) o tōna marau i roto i te kaupapa NCEA

This school raised concerns about NCEA, including:

- Scholarship option not available for Te Reo Rangatira
- the lack of achievement standards written in te reo Māori for subjects other than Te Reo Māori and Te Reo Rangatira.

School K worked independently of other schools, spending the whole day in their departments. Information Management teachers discussed assessments and moderated work. They found the day useful. English spent the day moderating several marked examples. As a result of the day, the teacher in the interview felt more confident in applying assessment. Business studies have a partnership with MIT[12], they spent the day modifying MIT assessments. Soft Materials (Technology) talked about moderation, while Geography moderated some internals, looked at changes to level 3 standards and developed some resources. History teachers moderated some level 2 and 3 internals.

The school's teachers thought this day was more useful than previous NCEA professional development days as in the past there were discrepancies, facilitators who did not know enough and conflicting information.

[12] Manukau Institute of Technology.

The teachers identified areas that they would like further professional development including:

- developing assessments that are relevant to their students
- new business studies unit standards
- changes to standards, annual professional development to keep up to date
- Technology – applying the standards in our area of expertise
- Accounting – new international accounting standards, and which to apply to achievement standards.

School G had not closed for the day or carried out the two half days schoolwide professional development. The teachers at this school were asked what sort of NCEA professional development they felt they needed. Their responses included:

- whenever standards are revised there needs to be professional development
- professional development should be paid for by the Ministry of Education
- ongoing professional development.

Wharekura

All three of the wharekura involved in this research chose not to cluster with other schools, as their learning needs were identified as being different to the mainstream schools in their area. The needs were identified through hui with teachers, wharekura management and whānau.

Within the wharekura interviewed strategic decisions are made by the school and its community to broaden the approach to teaching and learning. This is done by engaging with tertiary providers early in student senior years at school and developing learning pathways for those students where applicable, or where the opportunity presented itself. The need to engage with professional development was done in a strategic way with the needs of the students being the catalyst for teacher development.

The analysis toolkit was not used by any of the wharekura. One wharekura already had a plan for what they needed to develop within teaching towards qualifications including NCEA. The other two chose not to use it and felt it did not reflect their reality.

Needs identified included identifying student pathways, and the role of NCEA in these pathways. Possible pathways for the students included achievement standards, unit standards or tertiary providers such as whare wānanga, university or polytechnic. This determined the specific professional learning needs of the teachers.

Teachers at the wharekura came together at the beginning of the day to look at generic NZQA processes and protocols. They used expertise from within their schools as there are few advisors available in senior subjects other than Te Reo Māori and Te Reo Rangatira who can support teachers working in Māori medium. One wharekura then looked at the asTTle learning tools and their application within the subject area of te reo Māori and pāngarau. The other two wharekura went on to look at the individual being taught at the wharekura.

One focussed on the process of passing on data to NZQA, ie student results. The other focussed on programme and assessment development in English, Maths, and Tikanga-a-Iwi.

Following the professional development, the teachers saw the day as worthwhile, particularly a teacher new to one of the wharekura who saw it as helping piece together NCEA processes and informing her teaching at this level.

A concern expressed in the focus group interviews was that the comments included in moderation statements went beyond what was asked in the achievement standards. They felt that greater clarity was needed in the wording.

Wharekura involved in the evaluation made consistent comment about the lack of teachers able to teach senior subjects in Te Reo Māori, and that they were likely to utilize non-certificated teachers in the delivery of 'Te Ao Māori' within these learning areas. The wharekura interviewed also utilised the services of senior subject teachers not fluent in te reo Māori to deliver in some areas of Science and Mathematics. They stated that if they were able to engage a te reo Māori speaker in these areas then they would prefer this.

The area of Scholarship, as indicated by NZQA and the Ministry of Education in Scholarship subjects, was not seen by wharekura to recognise the quality of Te Reo Māori and therefore they felt that there were mixed signals about language value and quality. Scholarship is only available in Te Reo Māori which is designed for second language learners, but not for Te Reo Rangatira, which is aimed at a higher level of language proficiency; therefore Te Reo Māori appears to have higher qualification mana than Te Reo Rangatira.

Beginning Teachers and Teachers New to New Zealand

There was no specific question in the focus groups or telephone interviews about the extra needs of beginning teachers and teachers new to, or returning to, New Zealand. However, this was a group that was reporting different learning needs and experiences. During the course of interviews, comments about, and by, the new teachers to New Zealand or beginning teachers, are aggregated.

There was general agreement that the professional development was particularly useful and necessary for beginning teachers and teachers new to New Zealand. Teachers at one school commented on the combined difficulty of being a new teacher and a teacher in charge of a subject in a small school.

Some schools commented that they had formal and informal systems in place to assist new teachers in all aspects of their teaching, including NCEA. One teacher noted that beginning teachers' meetings did not seem to deal with NCEA. The formal systems were not reported as being available to teachers new to New Zealand. The particular areas of need for the new teachers were writing assessments, and having exemplars and moderated resources available.

Beginning teachers were included in the planning of the NCEA professional development day at some schools. In one case a new teacher was included in a cross-section of staff which worked through the needs analysis toolkit. Another school consulted specifically with new teachers about their needs for the professional development day. One school noted that they do needs analysis with their new teachers anyway.

At some schools, the needs for beginning teachers or those new to New Zealand were included in the programme. One of the cluster groups ran a special workshop for new teachers. Another commented that the section on moderation during the professional development day was mainly for the benefit of new teachers. Another teacher said that the most useful thing about the day was the upskilling of new teachers.

Teachers new to New Zealand were generally positive about the professional development day. Comments included "useful", "very good", "the day helped", "I am more confident". One teacher from Britain commented, "Never done clustering in England". A teacher, newly arrived from South Africa, was pleased to get useful information about unit standards and other resources from the HOD at another school. A department consisting of a second year teacher and a teacher returning to teaching saw the day as a useful starting point for writing assessments, and have since completed eight. However, one new teacher found the day confusing. "The day actually made things a lot 'unclearer' (sic). I still don't know the difference between the levels."

Some school leaders commented specifically on how quickly some South African and British teachers picked up on the NCEA system. One teacher from South Africa was described as "taking to it (the system) like a duck to water".

Suggestions were made by some leaders and teachers on how to meet the learning needs of teachers new to New Zealand including providing extra professional development for new teachers such as matching the opportunities available in England, where all teachers get three days professional development per year for GCSE and improving the online information: "the NCEA website could do with an introduction to NCEA and breaking down the jargon, and access to up to date formats".

Table 4.3: What the focus group teachers did the day their case study school closed

Case study school	Moderation	Changes to standards	Modifying or writing assessments	Department or school planning	Results and achievement	Developing resources	Exchanging ideas	Modifying courses	Other
A	■		■	■			■		Teaching and temperament workshop. Filing.
B	■						■		
C	■						■		Schooling in the future
D		■				■			Achievement objectives for reporting. How to record oral presentations
E		■	■		■	■	■	■	
F	■		■	■					KAMAR workshop and smartboard workshop
G									Did not close for a day of professional development.
H		■	■	■	■			■	School wide policies and procedures
I				■	■			■	NCEA administration
J				■					AsTTle workshop for HoDs
K	■	■	■	■					

Note that at some schools each teacher reported focusing on different things, whereas at other schools everyone was doing the same thing.

Summary from Senior Management and Teacher Interviews

Timing of the Professional Development

Schools were notified of the professional development resource mid-2005 and were given permission to close their schools for two half-days for the professional development.

- Few schools utilised the additional professional development resource before the end of the 2005 school year (5 of 28 schools reporting), and one of these schools did so in June 2005 prior to receiving the needs analysis toolkit. The majority of schools did not schedule professional development until well into the 2006 year, 11 in March, six between April and June, and one not yet scheduled as of late June.

- School reasons for not scheduling professional development until 2006 was that 2005 professional development was already set by the time additional resourcing had been made available and they felt notice was too late in the year to adjust a planned programme of professional development. Some schools noted their preference to defer the professional development until the start of 2006 so that the needs analysis and professional development could be done based on 2006 personnel, including any new staff.
- All schools completing their professional development at the time of our report elected to close their school for one full day for the professional development.

Use of the needs analysis toolkit

Notice of the additional resource and opportunity for professional development included a needs analysis toolkit that was made available but not required as the basis for the design and delivery of professional development at each school.

- Schools varied greatly in their use of the needs analysis toolkit, with key personnel at some schools indicating they were unaware of the toolkit or did not look at it (six schools), looked at it but decided not to use it (nine schools), used the toolkit as is (10 schools), or adapted the toolkit for use (three schools).
- Low decile schools were more likely than middle or high decile schools to have decided not to use the toolkit. Two of these low decile schools said the toolkit was not appropriate for their schools, and only the high decile schools adapted the toolkit to suit their schools. Middle decile schools were most likely to use the toolkit as is.
- Girls' schools used a needs analysis widely within their schools; boys' schools did not.
- School size was not related to use of the needs analysis toolkit, nor was use related to whether or not a school clustered with other schools for professional development.
- A minority (three of 11) of the case study schools said they would use the toolkit in planning for future professional development or were still using it.

Clustering for professional development

Whether or not schools chose to cluster with other schools for professional development varied as a function of department size, location of the school, history of clustering, and other factors such as timing of the professional development in relationship to that of other potential cluster schools. Over 50% of schools chose to cluster at least partially, with approximately 40% electing to carry out all professional development without clustering.

- Four of the schools in the study had difficulty in organising the use of the professional development day. Each of these schools had changes occurring in their senior management teams. One of the case study schools had not used the resource by the end of June 2006.
- Large departments within a school typically did not cluster across schools, whereas small departments in large schools, and small schools in general, were most likely to cluster.
- Schools with a whole school approach to professional development and those with no history of clustering were least likely to cluster; wharekura did not cluster as potential cluster partners were too dispersed geographically. Schools that did cluster did so

with schools of similar characteristics. For example, all small rural or all decile 1 schools valued the contact that they had with colleagues from other schools.

- Clustering occurred across decile ranges, school sizes and urban/rural venues. Clusters were regionally-based and varied in size from three to more than 10 schools.
- Clustering was most likely to occur where some clustering was already in place, and existing clustering was related to active involvement in clustering activities by staff from the regional school support advisory services.
- Clustering decisions tended to be driven by the school principal and were sometimes influenced by regional advisors.

Focus of the professional development day

Each school was able to decide on the focus for the NCEA professional development day for its teachers. A number of different approaches were used to make the decision on how to use the day. There were similarities across schools with the content of the day, with most schools focusing for at least part of the day on subject-based NCEA programmes, moderation and assessment.

- The decision making process on how to best utilise the resources provided by the Ministry of Education was unique at each of the case study schools. The comparison schools could be matched to the different paths observed at the case study schools. It was usually the principal of a school who made the decision to cluster or not.
- The majority of teachers in the case study schools spent the time in department or subject clusters looking at the changes to achievement standards, NCEA assessment tasks and moderation.
- Three case study schools that worked independently of other schools, and one which clustered, spent part of the day as a whole group. Six schools had teachers working in their subject areas all day, whether clustered with teachers or within their own school.
- Some schools and departments chose to not solely focus on the technical aspects of implementing achievement standards in their NCEA professional development. The use of tools such as asTTle, KAMAR, Smart Boards were included at some schools. One school examined the achievement of boys. Some departments examined year 9 and 10 programmes and achievement, and some worked on filing and administrative tasks.
- None of the schools in the study had focussed on Scholarship. In one cluster group, examining Scholarship was an option for the English teachers.
- Scholarship was the area identified by 70% of the case study schools as an area that needs further professional development.
- Further learning needs identified were unique to individual schools or areas.

Facilitators

The majority of schools had heads of department as the facilitators of the NCEA professional development. A few used advisors or other external expertise as facilitators. In one cluster the advisors sat in alongside the teachers.

Teachers' experiences of the day

One out of 10 case study schools stood out with negative comments about the professional development day. This school was part of a full cluster group where the day appeared to be poorly organised.

Further NCEA professional development planned

Four schools planned, or had already carried out, a second NCEA professional development day.

Comparing to previous NCEA professional development

The school leaders felt that this round of NCEA professional development was more reflective than previous NCEA professional development days. Being able to focus on local needs was appreciated by all schools that did this.

Wharekura

Wharekura followed a different decision-making pathway when planning for their NCEA professional development day.

Wharekura had unique differences when compared to the mainstream schools in this study. This included:

- involving their community/whānau in the planning
- focusing on the different qualifications and learning pathways for their students
- not having access to support from advisory services, and
- having difficulty in clustering due to geographical dispersal.

Teachers new to New Zealand and beginning teachers

The teachers new to New Zealand and beginning teachers have reported different learning needs to their more experienced colleagues. Beginning teachers reported having support structures in place, though these did not always include specific NCEA. Teachers new to New Zealand appeared to need increased support to understand and implement NCEA in their classes. New and beginning teachers who are working in sole departments found the clustering particularly useful.

CHAPTER 5

Results from the Teacher Surveys

Aim and Focus of the Surveys

The overall aim of the teacher surveys was to identify the level of satisfaction of participants with the further NCEA professional development provided through MOE funding over the period June 2005 to July 2006. Surveys were conducted with the participating schools in two stages: a pre-questionnaire was administered towards the end of 2005 prior to the implementation of the professional development, and a post-questionnaire was administered in 2006 following implementation. The timing of the post-questionnaire followed the completion of the professional development for each school. The purpose of the pre-questionnaire was to establish teachers' perceptions of a number of themes related to effective professional development, both generally in respect of teachers' previous experiences of in-service professional development, and specifically with reference to earlier NCEA provisions. The post-questionnaire repeats some of the questions in the pre-questionnaire for comparative purposes, but also includes themes that focus on teachers' perceptions of the value of the 2006 NCEA professional development.

Further information and results are presented separately under the following headings:

- Statistical analysis of the pre-questionnaire
- Statistical analysis of the post-questionnaire
- Analysis of qualitative data from the pre- and post-questionnaires
- Integration of the results from the quantitative and qualitative data analyses

The second of these analyses includes, where relevant, comparisons between the pre- and post questionnaire data. One important caveat to these comparisons is that the number of respondents to the post-questionnaire (N=449) was 221 less than the respondents to the pre-questionnaire (N=670); this clearly suggests the need for caution in comparing the results from the two administrations. Furthermore, it is important to recognise that staff changes will have occurred in schools between 2005 and 2006.

Statistical Analysis of the Pre-questionnaire

The pre-questionnaire is shown in Appendix C. It comprises 18 closed format questions (e.g., tick a box, yes/no, rank 1 to 4, rate 1 to 5) that cover relevant demographic data about participants (Question 1-6) and teachers' perceptions about themes related either generally to professional development or specifically to the NCEA context. There are also three open-ended questions asking teachers to supply information about their NCEA professional development needs (Question 11) and the factors they think affect positively or negatively the quality of professional development programmes (Questions 20 and 21).

Because of the length of the questionnaire (some questions have several items within them), cross-tabulations between questions have been limited mainly to comparisons involving demographic divisions within the data (e.g., by gender, by years of experience, and by subject taught). The possibility exists for further comparisons to be made, but care needs to be taken to ensure that the division of the total sample (N=670) into smaller sub-groups (cells) does not reduce the data to the point that sensible interpretations of findings are affected by cell size.

Demographic data (Questions 1-6)

Questionnaires were received from 19 schools providing a total of 670 completed forms (Question 1). Replies were received from 409 female and 261 male teachers respectively (Question 2); these figures equate to 61% and 39% of the total sample. A total of 189 respondents (28.2%) identified themselves as a head of department (Question 4), and 23 respondents (3.4%) identified themselves as a professional development coordinator for NCEA in their school (Question 5).

Table 5.1 below provides a breakdown of respondents by first and second subject areas of teaching. Frequencies and percentages are presented.

In respect of teachers' first subject area, most responses were received, not surprisingly, from English (N=111; 16.6%) and Maths teachers (98; 14.6%) followed by Technology, Physical Education, and Science. Shadings in Table 5.1 identify subjects with 30 or more respondents; only these subjects are included later in cross-tabulations with selected questions—subjects with fewer than 30 do not provide sufficient numbers in enough cells to draw reasonable conclusions. In respect of teachers' second subject area, the most frequently listed subjects were Social Studies, Unit Standards, Science, and Health. The research team could find no strong reason to cross-tabulate teachers' second subject area with other questions.

Data from the final demographic question (Question 6) are summarised in Table 5.2. Frequencies and percentages are presented for the years of service of respondents in relation to their teaching at the secondary level. Perhaps the main point to note is that nearly 70% of the sample are covered by the last three categories—these are teachers who would have experienced both the pre-NCEA and NCEA systems of assessment.

Table 5.1: Distribution of respondents by first and second subject areas (Question 3)

Subject	First Teaching Subject		Second Teaching Subject	
	Frequency	% of Sample	Frequency	% of Sample
Accounting	16	2.4	8	1.2
Agriculture	2	0.3	3	0.4
Visual Art	26	3.9	10	1.5
Art History	24	3.6	19	2.8
Biology	28	4.2	17	2.5
Chemistry	16	2.4	9	1.3
Classical Stud.	6	0.9	4	0.6
Dance/Drama	12	1.8	8	1.2
Economics	14	2.1	11	1.6
English	111	16.6	23	3.4
Geography	18	2.7	7	1.0
Health	14	2.1	37	5.5
Languages (all)*	28	4.2	9	1.3
Graphics	12	1.8	17	2.5
Māori	10	1.5	4	0.6
Music	10	1.5	4	0.6
Media Studies	3	0.4	9	1.3
Maths	98	14.6	18	2.7
Physical Educ.	44	6.6	3	0.4
Physics	14	2.1	10	1.5
Science	38	5.7	53	7.9
Social Studies	14	2.1	71	10.6
Technology	52	7.8	31	4.6
Info. Mngment.	27	4.0	14	2.1
Unit Standards+	27	4.0	58	8.7
Total	**664**	**99.1**	**457**	**68.2**
No response	6	0.9	213	31.8

* Includes all languages except Māori.
+ Teachers self-identified themselves under this heading.

Table 5.2: Distribution of respondents by years of secondary teaching service (Question 6)

	Years of Secondary Teaching Service				
	2 years or less	3-5 years	6-10 years	10-20 years	20+ years
Frequency	108	104	94	161	203
% of Sample	16.1	15.5	14.0	24.0	30.3

Confidence and willingness to participate (Questions 7, 9, 10, and 12)

The results for Questions 7, 9, 10, and 12 have been grouped together in Table 5.3 because they are "single item" questions (they ask only one question each); the remaining closed format questions all contain several items and therefore the questions are treated separately.

The wording for each question is given in Table 5.3. It should be noted that the rating scale for each question has been collapsed for simplicity of presentation; ratings 5 and 4 (the positive end of the respective scales) have been combined, as have ratings 2 and 1 (the negative end)[13]. However, the final column of the table identifies the "modal" category and its percentage based on the full 5-point scale. This provides further information on the "centrality" of the ratings for each question.

The overall pattern from Table 5.3 provides a positive picture of:

- teachers' confidence in respect of their knowledge and skills in assessing for NCEA (Questions 7 and 12),
- teachers' willingness to participate in further professional development for NCEA (Question 9), and
- teachers' selectivity in engaging in professional development related to their needs (Question 10).

In three questions, the combined categories of "5+4" exceed 70% of the total ratings; in all cases the modal rating category is "4" or "5".

It should be noted that cross-tabulations of these questions by gender (Question 2) identified very similar patterns between male and female teachers on all four questions in Table 5.3—there were no significant differences. For example, respective percentages (male and female teachers) on each Question for the combined "5+4" rating categories were:

Question 7: Males 79.5%; Females 75.4%
Question 9: Males 80.0%; Females 79.6%
Question 10: Males 53.6%; Females 57.3%
Question 12: Males 73.7%; Females 75.9%

Cross-tabulations were also conducted by "first teaching area" in relation to the five subjects identified in Table 5.1 as having 30 or more respondents. The general pattern noted for Questions 7, 9 and 12 were repeated for all subjects, that is, highest percentage ratings were obtained for the "5+4" category, but a statistically significant difference was observed between subjects on one of these three questions (Question 9) due to a very high percentage of ratings for "5+4" by Physical Education teachers (97.7%). The other subjects ranged from 86.5% (Technology) to 68.4% (Science).

In respect of Question 10, a variation on the overall pattern of ratings was observed: highest percentage ratings were obtained for category "3" in the case of Technology; percentages for the "5+4" category ranged from 68.0% (English) to 38.0% (Technology).

[13] This approach to the presentation of data has been followed throughout the report. The labelling of the combined categories ("5+4" and "2+1") attempts to capture the meaning of the scale; for example, "confident" and "not confident" are used for Question 9.

Table 5.3: Distribution of respondents for Questions 7, 9, 10, and 12

Question 7: *How confident are you at accurately assessing student work for NCEA?*				
Rating	confident (5+4)	sometimes (3)	not confident (2+1)	Modal Category
Frequency (%)*	512 (77.0)	115 (17.3)	38 (5.7)	Rating = 4 (53.7)
Question 9: *How important is it for you to participate in further PD for NCEA?*				
Rating	important (5+4)	to some extent (3)	not important (2+1)	Modal Category
Frequency (%)	532 (79.8)	97 (14.5)	38 (5.7)	Rating = 5 (51.6)
Question 10: *How do your expressed professional learning needs influence the PD provided to you?*				
Rating	influenced (5+4)	some influence (3)	not influenced (2+1)	Modal Category
Frequency (%)	355 (55.8)	232 (36.5)	49 (7.7)	Rating = 4 (41.0)
Question 12: *Rate your knowledge and skills in teaching and assessing NCEA for your first subject.*				
Rating	excellent/vg (5+4)	satisfactory (3)	limited (2+1)	Modal Category
Frequency (%)	499 (75.0)	130 (19.5)	36 (5.4)	Rating = 4 (56.8)

* Percentages are based on the number of respondents who answered each question.
Statistically significant differences were obtained for subject differences on Questions 9 and 10:
Question 9: (Chi-square = 19.66, df = 8, $p < .05$);
Question 10: (Chi-square = 20.88, df = 8, $p < .01$).

Professional learning activities undertaken in 2005 (Question 8)

The results for Question 8 are presented in Table 5.4. This question simply asks respondents to tick the box corresponding to the professional learning activities they had undertaken in 2005. Frequencies and percentages are presented for each item.

It is clear that curriculum workshops (60.4%), teacher networks (41.2%), short courses (27.6%), and conferences (25.5%) were the most common forms of professional development/learning activities undertaken during 2005. National Scholarship workshops and formal study (undergraduate and postgraduate combined) were identified by 19% and 17% of the sample respectively. Under “other”, responses were received from 61 participants; 10 respondents identified NCEA related activities (e.g., marking, moderation), eight identified “Te Kotahitanga”, four attended “cluster” meetings, three listed “numeracy” activities, a further three listed ICT/computer courses, and two listed ATOL programmes. The remaining activities were not listed more than once and so are not reported here.

Table 5.4: Professional learning activities undertaken in 2005 (Question 8)

Professional learning activity	Frequency (% of sample)
National Scholarship workshop	127 (19.0)
Formal study for undergraduate qualification	37 (5.5)
Formal study for postgraduate qualification	77 (11.5)
Curriculum based workshop	405 (60.4)
Conference	171 (25.5)
Short course	185 (27.6)
Participating in teacher networks (online/face-to-face)	276 (41.2)
Award for study leave	5 (0.7)
Other (please specify)	63 (9.4)

Preferred modes of professional development (Questions 13 and 14)

Questions 13 and 14 cover teachers' preferred mode of engagement/delivery of professional development, both generally (Question 13) and with specific reference to NCEA (Question 14). The focus of the latter is on the "further" activities as part of the 2005-06 Ministry provision.

For both questions a list of options was provided and respondents ranked their top four preferences: 1 = most preferred; 2 = second most preferred; and so on. For the purposes of coding and analysis, options that were not ranked in the top four were given a ranking of "5". The final column of each table contains the mean rank for each item; this is intended only as an approximate indicator of the overall popularity of each item.

It is clear that the first item in Table 5.5, "clustering with teachers from other schools or wharekura", is the most preferred mode of engagement. This item had the highest percentages for both Ranks "1" and "2" and the lowest percentage for being unranked (assigned a Rank of "5"). "Professional development within own school" and "individual professional development through short courses" were the next most preferred modes of engagement. The least preferred mode was "participating in an on-line learning community"; this mode was omitted from the ranking of items by nearly 86% of the sample.

Table 5.5: Preferred mode of professional development generally (Question 13)

Preferred mode of engagement with PD generally	Frequency and percentage					Mean Rank
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5*	
1. Clustering with teachers from other schools or wharekura	191 28.5	151 22.5	93 13.9	73 10.9	162 24.1	2.8
2. Professional development within own school or wharekura	130 19.4	124 18.5	105 15.7	70 10.4	241 35.9	3.2
3. Individual professional development through short courses	109 16.3	138 20.6	116 17.3	92 13.7	215 32.0	3.2
4. Individual professional development leading to a qualification	44 6.6	36 5.4	33 4.9	48 7.2	509 76.0	4.4
5. Attendance and participation in professional conferences	49 7.3	68 10.1	85 12.7	109 16.3	359 53.6	4.0
6. Participating in an on-line learning community	7 1.0	22 3.3	27 4.0	39 5.8	575 85.8	4.7
7. Subject specific network meetings and communication across schools ...	96 14.3	88 13.1	98 14.6	82 12.2	306 45.6	3.6
8. Linking professional development with my personal appraisal goals	40 6.0	48 7.2	54 8.1	82 12.2	446 66.6	4.3

* A rank of "5" was assigned to any "unranked" item by each teacher.

Table 5.6: Preferred mode of further professional development for NCEA (Question 14)

Preferred format for delivery of further PD for NCEA	Frequency and percentage					Mean Rank
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5*	
1. Clustering with other schools for common PD needs, sharing experiences and expertise	156 23.3	115 17.2	98 14.6	81 12.1	220 32.8	3.1
2. Own school only, using staff expertise or outside experts to meet your school's identified PD needs	133 19.9	94 14.0	80 11.9	63 9.4	300 44.7	3.4
3. Contracting with an outside expert to work with my school or wharekura over time, focussed on particular PD needs	85 12.7	69 10.3	71 10.6	68 10.1	377 56.2	3.9
4. Clustering with schools to develop resource material on assessment, or teaching, or benchmarking, or other	87 13.0	136 20.3	100 14.9	93 13.9	254 37.9	3.4
5. Clustering with schools to identify several strands for PD, with participants selecting the strand of their choice...	36 5.4	42 6.3	71 10.6	69 10.3	452 67.4	4.3
6. Establishing an on-line community, linking to experts and/or sharing resource development	20 3.0	30 4.5	47 7.0	46 6.9	527 78.6	4.5
7. Using audio-visual links with schools and wharekura to build & support on-line communities for common PD needs	4 0.6	5 0.7	12 1.8	15 2.2	634 94.6	4.9
8. Engaging in field trips and other demonstrations of good practice or innovations in my subject	33 4.9	59 8.8	46 6.9	58 8.7	474 70.7	4.3
9. Examining and discussing complete exemplars of good practice (trialled assessments and model answers)	120 17.9	115 17.2	100 14.9	107 16.0	228 34.0	3.3

* A rank of "5" was assigned to any "unranked" item by each teacher.

In relation to further NCEA professional development (Table 5.6), Item 1 ("clustering with other schools for common PD needs...") is the most preferred mode of delivery. This item had the highest percentage for Rank "1" (23.3%) and the lowest percentage for being unranked (32.8%). Item 9 ("examining and discussing complete exemplars..."), Item 2 ("own school only..."), and Item 4 ("clustering with schools to develop resource material...") were the next most preferred modes of engagement. The least preferred modes were Item 7 ("using audio-visual links with schools...") and Item 6 ("establishing an on-line community...); these modes were excluded from the top four ranking by 94.6% and 78.6% respectively of the sample.

Because the data in Tables 5.5 and 5.6 are rankings rather the ratings, cross tabulations have not been conducted; the percentages for each item are not independent of the percentages for other items.

Important characteristics of professional development (Question 15)

Table 5.7 sets out the responses of teachers to the importance of particular characteristics associated with professional development. For each item within Question 15, the table sets out the response rate under three categories (ratings for "5+4", "3", and "2+1") along with the modal rating category from the full five point scale. The final column identifies the percentage of the sample that agreed (i.e., "ticked" column B of the questionnaire) that their previous experience of professional development for NCEA conformed with the characteristic as listed.

Table 5.7: Preferred characteristics of professional development (Question 15)

Item	Rating of importance: frequency & percentage* of sample			Modal category & percentage*	Typical of previous NCEA PD experience*
	major importance "5+4"	of some importance "3"	minor importance "2+1"		
1. The PD acknowledges what I want and need	507 83.7	82 13.5	17 2.8	Rating=5 63.9	263 47.0
2. The PD provides new knowledge covering theory, content or practice	481 79.6	99 16.4	24 4.0	Rating=5 49.8	308 55.2
3. The PD engages me in examining good teaching in my own setting	486 80.9	91 15.1	24 4.0	Rating=5 47.9	248 44.4
4. The PD involves collecting & analysing data from my own work	213 35.7	236 39.6	147 24.7	Rating=3 39.6	129 23.1
5. The PD provides for critical reflection & challenges beliefs	334 55.9	188 31.5	75 12.6	Rating=4 32.0	231 41.3
6. The PD supports practice that is inclusive of student diversity	373 62.7	160 26.9	62 10.4	Rating=5 32.6	187 33.5
7. The PD helps me to change practices, beliefs & attitudes	327 54.7	188 31.4	83 13.9	Rating=3 31.4	195 34.9
8. The PD empowers me to further my own professional development	442 74.0	113 18.9	42 7.0	Rating=5 46.2	235 42.0

* Percentages based only on those who responded to each item.

It is clear that all items are deemed to be at least of some importance for professional development, and in most cases of "major" importance. Item 1 ("the PD acknowledges what I want and need") is clearly the most valued by participants (63.9% of the sample provided a rating of "5"), although Items 2, 3 and 8 are also very strongly rated. Item 4 ("the PD involves collecting & analysing data from my own work") is the least strongly rated of the eight items but is still positively valued overall. The final column of Table 5.7 indicates that most of the items have been part of the previous professional development experiences of some/many participants, although the pattern suggests that Items 1, 2, 3, 5 and 8 have been more commonly experienced than Items 4, 6 and 7.

The cross-tabulations of Question 15 with gender, experience and subjects identified only three instances of a significance difference, all related to gender. The pattern was for female teachers to rate all items as being of greater importance than their male counterparts; in the case of Items 3, 5 and 6 the results reached statistical significance. The chi-square analysis for these three items are summarised below; the "difference" percentage relates only to the "major importance" category—clearly that difference is associated with a reverse difference in at least one of the other two categories ("of some importance"; "minor importance").

Item 3:	Difference = 9.1%,	Chi-square = 7.85,	df = 2,	p < .05
Item 5:	Difference = 7.5%,	Chi-square = 7.54,	df = 2,	p < .05
Item 10:	Difference = 11.0%,	Chi-square = 19.25,	df = 2,	p < .01

Further important characteristics (Question 16)

Table 5.8 sets out the results for Question 16, identifying further characteristics important for effective professional development. As in the case of Question 15, participants were asked to rate each item for its importance; in addition, they were asked to rank the top four items. In relation to the rankings, three pieces of information are given for each item: the percentage of the sample that ranked the item as "1"; the percentage of the sample that did not give the item a top four ranking at all ("unranked"); and the mean rank, where "unranked" items are given a score of "5".

Table 5.8: Further characteristics of professional development (Question 16)

Item	Rating of importance: frequency & percentage* of sample				% for Rank=1; % unranked; mean rank
	major importance "5+4"	of some importance "3"	minor importance "2+1"	Modal category & percentage*	
1. Being offered content that meets my needs in my subject area	549 92.6	34 5.7	10 1.7	Rating=5 80.6	59.7 19.2 2.1
2. Preparing key goals and objectives at the beginning of the programme	382 64.5	152 25.7	58 9.8	Rating=5 36.1	8.1 64.2 4.1
3. Having a team approach	267 45.3	219 37.2	103 17.5	Rating=3 37.2	3.9 78.9 4.5
4. Having facilitators that understand the context and needs of participants	535 90.2	39 6.6	19 3.2	Rating=5 73.2	15.6 26.4 2.9
5. Using the school as the main venue	147 25.0	142 24.2	298 50.8	Rating=1 33.0	3.0 88.6 4.7
6. Utilising workshops/short courses	293 50.3	205 35.2	84 14.4	Rating=3 35.2	2.5 78.6 4.6
7. Stating clear outcomes for participants	386 65.8	144 24.5	57 9.7	Rating=4 33.0	3.8 71.6 4.4
8. Keeping everyone focussed, including facilitators	434 74.2	116 19.8	35 6.0	Rating=5 40.0	3.0 69.2 4.4
9. Ensuring adequate time for reflection on new ideas	373 64.0	168 28.8	42 64.0	Rating=4 35.0	4.1 68.9 4.4
10. Having opportunity in PD to apply new ideas in practice	372 63.3	162 27.6	54 9.2	Rating=5 33.0	4.4 61.5 4.2

* Percentages based only on those who responded to each item.

Overall, a very clear pattern emerges. Item 1 ("being offered content that meets my needs") and Item 4 ("having facilitators that understand the context and needs of participants") far exceed other items in respect of ratings and rankings. However, Items 2, 6, 7, 8, 9 and 10, while less impressive in their ratings and rankings, are still considered to be of major importance by at least 50% of the sample. At the other end of the spectrum,

Item 5 (“using the school as the main venue”) is the least important factor in determining effective professional development.

Cross-tabulations of Question 16 with gender, experience and subject, indicate no significant differences involving experience, one significant difference involving subjects, but five significant differences involving gender.

The only difference between subjects involves Item 4. It appears that respondents from Physical Education gave this item even higher ratings than teachers from the other subjects; 95.0% rated the Item as being of “major importance” (chi-square = 6.29, df = 2; $p < .05$).

The pattern of responses in respect of gender is similar to that noted earlier for Question 15; nine out of the ten items were rated as more important by female teachers than male teachers—the one exception being Item 5 (school venue). Significant differences were found on Items 2, 3, 7, 8 and 10. The chi-square results for these items are summarised below, along with presentation of the percentage difference (female % – male %) associated with the “major importance” category.

Item 2:	Difference = 9.3%,	Chi-square = 6.29,	df = 2,	$p < .05$
Item 3:	Difference = 9.9%,	Chi-square = 6.73,	df = 2,	$p < .05$
Item 7:	Difference = 11.3%,	Chi-square = 9.15,	df = 2,	$p \leq .01$
Item 8:	Difference = 11.3%,	Chi-square = 9.78,	df = 2,	$p < .01$
Item 10:	Difference = 11.2%,	Chi-square = 7.53,	df = 2,	$p < .05$

Useful resources for professional development (Question 17)

Table 5.9 sets out the results for Question 17, identifying the resources found useful for professional development. The data show the percentages for “yes” and “no” based on those who responded (there was a 98.0% response rate for Items 1 and 2, and a 97.7% response rate for Items 3-5).

Clearly all items were found useful, with Items 1 and 3 obtaining the highest percentages for “yes” and Item 5 the lowest.

Cross-tabulations for this question found no significant differences related to experience, but on all items except Item 5 (“sample tests”) females responded “yes” more often than males. The only item to produce a significant gender difference was Item 4; the percentage for “yes” was 11.2% higher for females (chi-square = 14.45, df = 1; $p < .01$).

Table 5.9: Resources identified as useful for professional development (Question 17)

Item	“yes”: found useful		“no”: not found useful	
	frequency	%*	frequency	%*
1. Exemplars	569	87.8	79	12.2
2. Resource books and/or materials	450	69.4	198	30.6
3. Assessment guides and/or marking schedules or rubrics	501	77.4	146	22.6
4. Examples of student work including assessment judgments	543	83.9	104	16.1
5. Sample tests	339	52.4	308	47.6

* Percentages based on the number who responded to each Item (648 for Items 1&2; 647 for Items 3-5).

Significant differences between subjects were identified in four of the five items. These are summarised below:

- Item 1: Ratings for "yes" varied from 94.4% for English to 75.5% for Technology (chi-square = 12.10, df = 4; $p < .05$)
- Item 2: Ratings for "yes" varied from 79.6% for English to 51.0% for Technology (chi-square = 14.34, df = 4; $p < .01$)
- Item 3: Ratings for "yes" varied from 94.4% for English to 76.3% for Science (chi-square = 14.46, df = 4; $p < .01$), and
- Item 5: Ratings for "yes" varied from 74.2% for Maths to 28.6% for Technology (chi-square = 33.41, df = 4; $p < .01$).

In relation to each subject, highest to lowest ratings for items were:

- English: 1 & 4, then 3, 2, 5
- Maths: 1, 4, 5, 3, 2
- Physical Education: 3, 1 & 4, 2, 5
- Science: 3, 1, 4, 2 & 5
- Technology: 4, 1, 3, 2, 5

It should be noted that the "other" category for this Item produced 31 responses covering items such as: sharing/comparing/looking at resources of other teachers (9); moderated assessments, moderation reports, past papers, and examiners' reports and model answers (6); and resources in particular formats, such as videos, audios, study guides, commercial units, booklets of student work, and teaching tools (7). The remaining items were not easily grouped.

Official experiences with NCEA (Question 18)

Table 5.10 summarises data in relation to Question 18. This question asks whether teachers have been formally involved in work such as marking NCEA examinations, moderating school assessments, or acting as the principal's nominee. The first column of the table lists the "experience", the second column identifies the frequency and percentage of the sample who have undertaken the work, and the remaining columns summarise how useful these sub-groups have found this work. No cross-tabulations were undertaken for this question.

Table 5.10: Official experiences with NCEA (Question 18)

Item	Experience: frequency & (%)	Rating of usefulness: Percentage			Modal Category & (%)
		very useful 5+4	of some use 3	of little use 2+1	
1. Marker for NCEA examinations	110 (16.4)	83.3	10.2	6.5	5 (66.7)
2. Moderator of NCEA school assessment	211 (31.5)	81.1	10.9	8.0	5 (63.7)
3. Regional or national NCEA facilitator	48 (7.2)	55.1	26.5	18.4	5 (34.7)
4. Other NZQA responsibilities for NCEA	50 (7.5)	73.3	13.3	13.3	5 (57.8)
5. Scholarship facilitator	23 (3.4)	50.0	20.8	29.2	5 (29.2)
6. Principal's nominee	31 (4.6)	63.6	21.2	15.2	5 (39.4)

The most common experiences identified in Table 5.10 are that of "moderator of NCEA school-based assessments" (31.5% of the sample) followed by "marker for NCEA external

examinations" (16.4%); all other roles have low percentages associated with them in respect of respondents' "official" experiences with NCEA other than as a teacher. It is also clear that the first two roles have been rated as the most useful, although "other NZQA responsibilities" is not far behind. The role of "scholarship facilitator" provides the least satisfactory ratings, however it should be noted that half of the group still provided ratings of "5+4". The general conclusion is that the participation in an official role has a positive impact on the professional development of teachers.

Desirable characteristics of facilitators/presenters (Question 19)

Table 5.11 sets out the results for Question 19, identifying the characteristics of facilitators considered by the sample to be important. This question follows the same format as Question 16, except that its content is focused on the qualities of facilitation valued by participants. Each item is both rated and ranked; as before the scales and rankings have been presented in reduced form.

The first point to note is that all items were very positively evaluated—all received highest percentages for "major importance" (5+4). In relation to the original 5-point scale, the modal category was "5" for seven of the ten items, "4" for two items, and "3" for the remaining item. However, the ranking information makes very clear that Item 2 ("good practical expertise in teaching my subject") and Item 3 ("good communication and relationship skills") are the most valued attributes of professional development facilitators. On the other hand, Item 6 ("good evaluation skills to collect and interpret data"), Item 7 ("good at keeping us on track"), and Item 8 ("good follow-up and feedback skills") were the least valued attributes.

Cross-tabulations of the data for Question 16 with gender, experience, and subject, indicate no significant differences involving experience, three significant differences involving gender, and four significant differences involving subjects.

Table 5.11: Desirable characteristics of facilitators and presenters (Question 19)

Item	Rating of importance: frequency & percentage* of sample				% for Rank=1; % unranked; mean rank
	major importance "5+4"	of some importance "3"	minor importance "2+1"	Modal category & percentage*	
1. Good knowledge of theory about pedagogy	402 70.4	132 23.1	37 6.5	Rating=5 42.7	16.7 60.0 3.9
2. Good practical expertise in teaching my subject	541 93.0	26 4.5	15 2.6	Rating=5 79.7	52.1 21.4 2.3
3. Good communication and relationship skills	521 89.5	53 9.1	8 1.4	Rating=5 62.7	12.7 36.1 3.3
4. Good reflective thinkers and practitioners	432 75.7	118 20.7	20 3.5	Rating=5 40.6	4.7 67.1 4.3
5. Good ability to challenge thinking and practice	439 76.9	101 17.7	31 5.4	Rating=5 38.7	4.3 61.2 4.2
6. Good evaluation skills to collect and interpret data	324 57.3	189 33.5	52 9.2	Rating=3 33.5	2.2 86.0 4.7
7. Good at keeping us on track	391 68.2	131 22.9	51 8.9	Rating=4 38.4	2.6 80.0 4.6
8. Good follow-up and feedback skills	382 67.1	142 25.0	45 7.9	Rating=4 38.0	2.2 80.3 4.6
9. Good knowledge of our school's needs	357 62.9	144 25.4	67 11.8	Rating=5 32.2%	4.7 74.4 4.4
10. Good at modelling appropriate practice	430 76.2	90 16.0	44 7.8	Rating=5 43.1%	5.8 66.5 4.3

* Percentages based only on those who responded to each item.

The pattern of responses in respect of gender is similar to that noted earlier for Questions 15 and 16; all ten items were rated as more important by female teachers than male teachers. Significant differences were found on Items 4, 8 and 10. The chi-square results for these items are summarised below, along with presentation of the percentage difference associated with the ratings for the "major importance" category.

Item 4: Difference = 11.6%, Chi-square = 11.94, df = 2, $p < .01$

Item 8: Difference = 10.4%, Chi-square = 6.97, df = 2, $p < .05$

Item 10: Difference = 10.8%, Chi-square = 9.65, df = 2, $p < .01$

The significant differences found between subjects related to Items 4, 5, 9 and 10:

Item 4: Ratings for "major importance" varied from 85.9% for English to 64.2% for Maths (chi-square = 22.91, df = 8; $p < .01$)

Item 5: Ratings for "major importance" varied from 90.2% for English to 68.3% for Technology (chi-square = 21.82, df = 8; $p < .01$)

Item 9: Ratings for "major importance" varied from 84.6% for Physical Education to 48.6% for Science (chi-square = 19.38, df = 8; $p < .05$), and

Item 10: Ratings for "major importance" varied from 90.0% for Physical Education to 72.5% for Technology (chi-square = 21.88, df = 4; $p < .01$).

In relation to each subject, the four items rated most highly (from highest to lowest) were:

- English: 3, 2, 5, 4
- Maths: 2, 3, 10, 5
- Physical Education: 3, 2, 1 & 10 (equal)
- Science: 2, 3, 1, 10
- Technology: 2, 3, 10, 1

The final point to make is that over the full ten items (aggregated) Physical Education teachers provided the most positive ratings and Maths and Technology teachers the least positive.

Summary of the Findings from the Pre-questionnaire

The main findings from the pre-questionnaire are summarised below:

- Questions 7, 9 and 12 indicate that teachers are generally confident about their knowledge and skills in assessing for NCEA but are also very willing to engage in further professional development.
- Question 8 identified that curriculum workshops, teacher networks, short courses, and conferences were the most common forms of professional development already undertaken in 2005 by teachers.
- Questions 13 and 14 indicate that teachers have a range of preferred modes for undertaking professional development. The most popular mode generally appears to involve clustering with teachers from other schools for sharing experiences, resources and expertise. However, there was good support also for own-school based professional development, short courses, and subject specific networking across schools. Participating in an on-line learning community was the least preferred. Specifically in relation to further NCEA professional development, clustering with other schools was again the most preferred model, although it was closely followed by own-school development with the input of outside expertise, clustering with schools to develop resource material on assessment and teaching, and examining and discussing exemplars of good practice. Again, participation in an on-line community was the least preferred.
- Questions 15 and 16 dealt with characteristics of professional development that teachers considered important. Most items in each question were very positively rated by teachers, but the most important characteristics appear to be: the professional development deals directly with the needs of participants; professional development engages teachers in examining good teaching in their own setting; professional development provides new knowledge covering theory, practice and content; and facilitators understand clearly the needs of participants.
- Question 17 indicates that the most useful professional development resources are: exemplars; examples of student work, including assessments of that work; and assessment guides and marking schedules.
- Question 18 dealt with the professional development value obtained from undertaking an official or formal role in NCEA/Scholarship, such as marker of external NCEA examinations or Scholarship facilitator. All roles were identified has having professional development value, but clearly the most valued were marker for NCEA external examinations and moderator of school-based assessments. The least satisfactory role was that of Scholarship facilitator.

- Question 19 focused on the qualities or attributes of a good facilitator of professional development. All items were positively rated, but two items stood out as being most important: having good practical expertise in teaching the participants' subject, and possessing good communication and relationship skills.
- Most questions were cross-tabulated with gender, experience and subject (only five subjects were included because of insufficient participants from other subjects; the subjects included were English, Maths, Physical Education, Science, and Technology). While gender and subject were sometimes linked with variations in ratings, experience appeared not to impact on the data. In respect of gender, the main point to emerge is that female teachers, far more often than males, gave higher ratings to items within questions. In most cases these differences were small, but there was still a consistency across the data. In respect of subject differences, it is hard to discern an overall pattern, but the fact that differences were sometimes found between the five subjects indicates that the design of professional development should take cognizance of subject-based preferences and styles.

Statistical Analysis of the Post-questionnaire

The post-questionnaire is shown in Appendix D. It comprises 26 closed format and three open-ended questions. Questions 1-6 cover demographic data about participants while questions 7 to 29 deal with teachers' perceptions about themes related either generally to professional development or specifically to their latest experience of professional development for NCEA. The open-ended questions (Questions 11-13) are analysed in the next section of this chapter.

Similar to the analysis of the pre-questionnaire, cross-tabulations between questions have been limited to comparisons involving demographic divisions within the data, but additional demographic questions have been included. These extra analyses cover differences between a selection of schools (Question 2), years of experience assessing for NCEA (Question 6b), and factors related to length of teaching experience (Question 6c); questions 6b and 6c were not part of the pre-questionnaire. Because of the size of the questionnaire, the cross-tabulations with professional development experiences (Questions 7-29) have been limited to analyses of "single-item" questions (nos. 7, 9, 14-20, and 22) since these mostly deal with reactions to the recent round of NCEA professional development. As noted with the pre-questionnaire, the possibility exists for further comparisons to be made, but care needs to be taken to ensure that the division of the total sample (N=449) into smaller sub-groups does not reduce the cell data to the point that sensible interpretations are not possible.

Demographic data (Questions 1-6)

Questionnaires were received from 22 schools providing a total of 449 completed forms (Question 1). Replies were received from 283 female and 162 male teachers respectively (Question 2); these figures equate to 63.0% and 36.1% of the total sample (four teachers did not identify their gender). The gender division was similar between the pre- and post questionnaires; the corresponding pre-questionnaire percentages were 61% and 39% respectively.

A total of 207 respondents (46.1%) identified themselves as a head of department (Question 4), and 13 respondents (3.0%) identified themselves as a professional

development coordinator for NCEA in their school (Question 5). The corresponding percentages for the pre-questionnaire were 28.2% and 3.4% respectively. This indicates that the post-questionnaire includes a significantly higher proportion of heads of department than the pre-questionnaire, a factor that needs to be borne in mind when interpreting the results of the post-questionnaire.

Table 5.12 below provides a breakdown of respondents by first and second subject areas of teaching. Frequencies and percentages are presented; percentages in parentheses are the figures from the pre-questionnaire.

In respect of teachers' first subject area, most responses were received again from English (N=71; 15.8%) and Maths (65; 14.5%) teachers. The next most responses were from teachers of "Unit Standards" based programmes (30), and from Physical Education (29), Information Management (28), Visual Art (23), Technology (22), Art History (21), Languages (21), and Science (20). The pattern of responses overall is quite close to that from the pre-questionnaire, the main differences being small increases for Visual Art (+1.2%), Art History (+1.1%), Information Management (+2.7%) and Unit Standards (+2.7%), and small reductions for Health (-1.4%), Science (-1.2%), and Technology (-1.6%). These subjects were the only ones that varied by more than 1% from the pre-questionnaire.

Shadings in Table 5.1 identify subjects with 30 or more respondents—English, Maths and Unit Standards. However, for reasons of continuity, the decision was made to use the same five subjects as before (from the pre-questionnaire) for cross-tabulation analyses with selected questions. Clearly, a good deal of caution is needed in drawing conclusions from the results for Science and Technology given their particular response rates.

In respect of teachers' second subject area, the most frequently listed subjects were again Social Studies (6.7% – down by 3.9%), Unit Standards (10.2% – up by 1.5%), Science (6.5% – down by 1.4%), and Health (4.7% – down by 0.8%). As in the case of the pre-questionnaire, the research team could find no strong reason to cross-tabulate teachers' second subject area with other questions.

Table 5.12: Distribution of respondents by first and second subject areas (Question 3)

Subject	First Teaching Subject		Second Teaching Subject	
	Frequency	% of Sample Post-Q. (Pre-Q.)	Frequency	% of Sample Post-Q. (Pre-Q.)
Accounting	14	3.1 (2.4)	7	1.6 (1.2)
Agriculture	2	0.4 (0.3)	1	0.2 (0.4)
Visual Art	23	5.1 (3.9)	2	0.4 (1.5)
Art History	21	4.7 (3.6)	10	2.2 (2.8)
Biology	16	3.6 (4.2)	9	2.0 (2.5)
Chemistry	7	1.6 (2.4)	3	0.7 (1.3)
Classical Stud.	6	1.3 (0.9)	2	0.4 (0.6)
Dance/Drama	6	1.3 (1.8)	6	1.3 (1.2)
Economics	11	2.4 (2.1)	8	1.8 (1.6)
English	71	16.6 (15.8)	16	3.6 (3.4)
Geography	16	3.6 (2.7)	4	0.9 (1.0)
Health	3	0.7 (2.1)	21	4.7 (5.5)
Languages (all)*	21	4.7 (4.2)	10	2.2 (1.3)
Graphics	6	1.3 (1.8)	12	2.7 (2.5)
Māori	7	1.6 (1.5)	0	0.0 (0.6)
Music	5	1.1 (1.5)	2	0.4 (0.6)
Media Studies	2	0.4 (0.4)	5	1.1 (1.3)
Maths	65	14.5 (14.6)	12	2.7 (2.7)
Physical Educ.	29	6.5 (6.6)	8	1.8 (0.4)
Physics	6	1.3 (2.1)	3	0.7 (1.5)
Science	20	4.5 (5.7)	29	6.5 (7.9)
Social Studies	6	1.3 (2.1)	30	6.7 (10.6)
Technology	22	6.2 (7.8)	19	4.2 (4.6)
Info. Mngment.	28	6.7 (4.0)	9	2.2 (2.1)
Unit Standards+	30	6.7 (4.0)	46	10.2 (8.7)
Total	**443**	**98.7 (99.1)**	449	**61.0 (68.2)**
No response	6	1.3 (0.9)	175	39.0 (31.8)

* Includes all languages except Māori.
+ Teachers self-identified themselves under this heading.

Analyses of the teaching and assessment experience of participants (Questions 6a-6c), are summarised in Tables 5.13a to 5.13c. The first of these tables presents the frequencies and percentages for the years of service of respondents in relation to their teaching at the secondary level; the data parallels that from Table 5.2 for the pre-questionnaire. Corresponding percentages from the pre-questionnaire are shown in parentheses. Table 5.13b summarises information about the years of experience of teachers in assessing for NCEA, and Table 5.13c identifies frequencies and percentages for different classifications of reasons for less than four years of teaching experience ("new to teaching", "new to teaching in New Zealand", "returning to teaching", and "other"). As already mentioned, data corresponding to Tables 5.13b and 5.13c were not collected for the pre-questionnaire.

Table 5.13a: Distribution of teachers by years of secondary service (Question 6a)

	Years of Secondary Teaching Service				
	2 years or less	3-5 years	6-10 years	10-20 years	20+ years
Frequency	64	73	85	100	122
% of Sample	14.4 (16.1)*	16.4 (15.5)	19.1 (14.0)	22.5 (24.0)	27.5 (30.3)

* Pre-questionnaire percentages are in parentheses.

The results for Question 6a indicate a similar pattern to that for the pre-questionnaire—higher percentages are associated for teachers with greater experience. The main difference compared to the pre-questionnaire is an increase of 5.1% for the 6-10 years' group.

Table 5.13b: Distribution by years of NCEA assessment experience (Question 6b)

	Years of NCEA assessment experience				
	less than 1 year	1 year	2 years	3 years	4 years
Frequency	43	44	44	68	247
% of Sample	9.6	9.9	9.9	15.2	55.4

The distribution for years of NCEA assessment experience shows that over half of the sample (55.4%) have had the full four years of experience; the next highest percentage is for three years of experience (15.2%).

In relation to teachers with less than four years NCEA assessment experience (Table 5.13c), the biggest classifications are associated with "new to teaching" and "new to teaching in New Zealand".

Table 5.13c: Factors associated with less than four years of NCEA experience (Question 6c)

	Factors associated with less than four years NCEA experience			
	New to teaching	New to teaching in NZ	Returning to teaching	Other
Frequency	89	54	20	26
% of Sample	19.8	12.0	4.5	5.8

Professional learning activities undertaken in 2005 (Question 8)

The results for Question 8a are presented in Table 5.14. The first question asks respondents to tick the box corresponding to the professional learning activities they had already undertaken in 2005. Frequencies and percentages are shown for each item along with the percentages obtained from the pre-questionnaire. The results for Question 16b are given as bullet points in the text below.

The relative popularity of the different forms of professional development are similar, but not identical to the pre-questionnaire results. School-based professional development was the most commonly cited form of professional development (75.1% – not asked in the pre-questionnaire), followed by curriculum workshops (60.8%), teacher networks (33.4%), National Scholarship workshop (24.1%), conferences (21.6%), and short courses (20.9%). The differences between the pre- and post-questionnaires possibly reflects the greater percentage of "heads of schools" who answered the post-questionnaire.

Table 5.14: Professional learning activities undertaken in 2005 (Question 8)

Professional learning activity	Frequency	% of sample	(% of Pre-Q. sample)
National Scholarship workshop	108	24.1	(19.0)
Formal study for undergraduate qualification	19	4.2	(5.5)
Formal study for postgraduate qualification	46	10.2	(11.5)
Curriculum based workshop	273	60.8	(60.4)
Conference	95	21.6	(25.5)
Short course	94	20.9	(27.6)
Participating in teacher networks (online/face-to-face)	150	33.4	(41.2)
Award for study leave	11	2.5	(0.7)
School-based professional development	337	75.1	NA*

* Not asked in the pre-questionnaire

In respect of Question 8b, which asked teachers to identify the NCEA training days that they had attended, the following frequencies and percentages were obtained:

- Level 1: 328 (73.1%)
- Level 2: 295 (65.7%)
- Standards-based assessment design: 75 (16.7%)
- Level 3: 242 (53.9%)

Reactions to latest Professional Development for NCEA (Questions 7, 9, 14-20, and 22)

The results for these questions are grouped together in the same sub-section because they are "single item" rating-type questions and deal with teachers' reactions to their latest NCEA professional development. Each question is covered in a separate table; these are numbered 5.15a to 5.15j and are presented in sequence before interpretations and comments are provided. It should be noted that Questions 7, 9 and 20 provide a basis for comparison with the pre-questionnaire results so include an extra line in their respective tables. Cross-tabulations of the demographic data with Questions 7, 9, 14-20, and 22 are presented in the next sub-section.

Table 5.15a: Teachers confidence in assessing NCEA (Question 7)

Question 7: ***How confident are you at accurately assessing student work for NCEA?***				
Rating	confident (5+4)	sometimes (3)	not confident (2+1)	Modal Category
Frequency (%)	347 (78.3)	78 (17.6)	18 (4.1)	Rating = 4 (57.1)
Pre-Quest. %	77.0	17.3	5.7	Rating = 4 (53.7)

Table 5.15b: Importance of latest NCEA professional development (Question 9)

Question 9: ***How important was it for you to have participated in the latest round of PD for NCEA?***				
Rating	major importance (5+4)	some importance (3)	minor importance (2+1)	Modal Category
Frequency (%)	302 (69.7)	91 (21.0)	40 (9.2)	Rating = 5 (39.5)
Pre-Quest. %	79.8	14.5	5.7	Rating = 5 (51.6)

Table 5.15c: Pace and focus of latest NCEA professional development (Question 14)

Question 14: ***Do you think that the pace and focus of the latest PD for NCEA fitted your needs?***				
Rating	mostly (5+4)	some of the time (3)	not often (2+1)	Modal Category
Frequency (%)	214 (50.5)	137 (32.3)	73 (17.2)	Rating = 4 (36.6)

Table 5.15d: Achievement of own goals (Question 15)

Question 15: ***Did you achieve your professional goals and objectives from the latest PD for NCEA?***				
Rating	very much so (5+4)	to some extent (3)	hardly at all (2+1)	Modal Category
Frequency (%)	185 (43.6)	155 (36.6)	84 (19.8)	Rating = 3 (36.6)

Table 5.15e: Contribution of latest PD for NCEA to student outcomes (Question 16)

Question 16: ***Has the latest PD for NCEA contributed to improving student learning outcomes?***				
Rating	very much so (5+4)	to some extent (3)	hardly at all (2+1)	Modal Category
Frequency (%)	224 (53.2)	132 (31.4)	65 (15.4)	Rating = 4 (31.8)

Table 5.15f: Contribution of latest PD for NCEA to your teaching (Question 17)

Question 17: ***Has the latest PD for NCEA improved the quality of your teaching?***				
Rating	very much so (5+4)	to some extent (3)	hardly at all (2+1)	Modal Category
Frequency (%)	158 (37.3)	154 (36.3)	112 (26.4)	Rating = 3 (36.3)

Table 5.15g: Contribution of latest PD for assessing NCEA (Question 18)

Question 18: ***Has the latest PD for NCEA improved your knowledge of how to assess for NCEA?***				
Rating	very much so (5+4)	to some extent (3)	hardly at all (2+1)	Modal Category
Frequency (%)	165 (38.6)	134 (31.4)	128 (30.0)	Rating = 3 (31.4)

Table 5.15h: Contribution of latest PD to your assessment knowledge (Question 19)

Question 19: ***Has the latest PD for NCEA improved your knowledge of assessment theory and practice?***				
Rating	very much so (5+4)	to some extent (3)	hardly at all (2+1)	Modal Category
Frequency (%)	134 (31.6)	158 (37.3)	132 (31.1)	Rating = 3 (37.3)

Table 5.15i: Rating of knowledge and skills in assessing first subject area (Question 20)

Question 20: ***Rate your knowledge and skills in teaching and assessing NCEA for your first subject.***				
Rating	excellent/vg (5+4)	satisfactory (3)	limited (2+1)	Modal Category
Frequency (%)	319 (75.2)	87 (20.5)	18 (4.2)	Rating = 4 (58.5)
Pre-Quest. %	75.0	19.5	5.4	Rating = 4 (41.0)

Table 5.15j: Application of latest PD for NCEA to own teaching (Question 22)

Question 22: ***How easy has it been to apply new knowledge & insights from the latest PD to your teaching?***				
Rating	very easy (5+4)	fairly easy (3)	not easy (2+1)	Modal Category
Frequency (%)	146 (36.2)	160 (39.7)	97 (24.1)	Rating = 3 (39.7)

The main points to emerge from Tables 5.15a-5.15j are as follows:

- Similar to the pre-questionnaire, teachers expressed confidence in their ability to assess for NCEA (Question 7) and to assess their first subject area (Question 22); the statistics were almost identical between the pre- and post questionnaire for Question 7, but there was a small fall in the figures for Question 22 from the post-questionnaire.
- In respect of Question 9, "importance of the latest professional development", teachers provided very high ratings (major importance = 69.7%; modal category = 5) although the percentages were lower than the pre-questionnaire which asked: "how important is it for you to participate in further professional development related to the NCEA" (major importance = 79.8%; modal category = 5).
- In relation to the pace of delivery of the latest professional development (Question 14), the modal category was "4" with approximately half of the sample (50.5%) clearly very satisfied with their experiences (ratings of "5+4"). A much smaller group (17.2%) were clearly dissatisfied (ratings "2+1"). A slightly less positive pattern was obtained for achievement of own professional goals and objectives (Question 15); the modal category was "3" ("to some extent"), but with a greater percentage of the sample indicating strong satisfaction (43.6%, ratings of "5+4") than low satisfaction (19.8%, ratings "2+1").
- Ratings of the impact of the professional development on assessment and teaching indicate "middling" reactions overall. The modal categories for the four questions concerned—Questions 17, 18, 19, and 22—were all "3" (equivalent to "to some extent" or "fairly easy"). Question 17 focused on the impact of the professional development on quality of teaching, Question 18 on the impact on how to assess for NCEA, Question 19 on improvement in theory and practice of assessment generally, and Question 22 on application of new knowledge and insights to teaching. Around 25-30% of the sample did not think that the professional development had changed their knowledge or skills to any extent (ratings of "2+1") in relation to these themes, but

conversely around 30-40% thought the professional development had had a clear positive effect (ratings of "5+4").

- The overall reaction of teachers to the Questions covered in this section is clearly positive (modal categories range from "3" to "5"), although for some of the themes covered there was a small group (15-30% of the sample) who were not as satisfied with their experiences.

Demographic cross-tabulations involving questions 7, 9, 14-20, and 22

This section sets out the significant findings involving cross-tabulations of the demographic data with teachers' reactions to their latest professional development for NCEA. Results are taken in turn for gender, experience, subject, and school. Experience has three components: years of teaching experience, years of assessing for NCEA, and factors associated with years of assessing for NCEA.

Cross-tabulations with Gender (Question 2)

Two questions (9 and 22) produced significant differences between male and female teachers. In both cases, females provided higher ratings than males, as indicated by the following summary:

Question 9: Importance of having participated in latest PD for NCEA

Ratings of "5+4":	Females 75.5%	Males 59.0%
Ratings of "3":	Females 15.7%	Males 30.8%
Ratings of "2+1":	Females 8.8%	Males 10.3%

Chi-square = 14.82, df = 2, $p < .01$

Question 22: How easy has it been to apply the latest PD for NCEA to your teaching

Ratings of "5+4":	Females 39.9%	Males 29.3%
Ratings of "3":	Females 35.6%	Males 47.6%
Ratings of "2+1":	Females 24.5%	Males 23.1%

Chi-square = 6.39, df = 2, $p < .05$

Cross-tabulations with years of teaching experience (Question 6a)

Two questions (7 and 20) produced significant differences in relation to the classification of teachers by years of experience. Not surprisingly the results show that the differences lie with the "2 years or less" group—these teachers indicated less confidence with being able to accurately assess for both NCEA and their first subject area.

Question 7: Confidence in accurately assessing for NCEA

Ratings of "5+4":	2 years or less teaching 43.8%	Total sample 78.5%
Ratings of "3":	2 years or less teaching 43.8%	Total sample 17.5%
Ratings of "2+1":	2 years or less teaching 12.5%	Total sample 4.1%

Chi-square = 59.17, df = 8, $p < .01$

Question 20: Rate your knowledge in assessing NCEA for your first subject area

Ratings of "5+4": 2 years or less teaching 50.0% Total sample 75.5%
Ratings of "3": 2 years or less teaching 40.0% Total sample 20.2%
Ratings of "2+1": 2 years or less teaching 10.0% Total sample 4.3%
Chi-square = 29.49, df = 8, p < .01

Cross-tabulations with years of experience assessing for NCEA (Question 6b)

Six questions (7, 15, 16, 17, 20, and 22) produced significant differences in relation to the classification of teachers by years of assessment experience for the NCEA. The results for three of the questions (7, 20, and 22) appear to be strongly related to years of assessment experience. In all cases lowest ratings are for the "less than 1 year" group and highest ratings are for the "4 years" and "3 years" groups.

In relation to Question 17 ("impact on improving the quality of teaching"), a line occurs between the "3 years" and "2 years" groups; similar percentages for "5+4" were found for the two groups above the line (e.g., 40.4% and 38.8% respectively for the "4 years" and "3 years" groups) and similar percentages for the three groups below the line (ranging from 33.3% to 29.3%), but the percentages were higher for the "above the line" groups.

In relation to Question 15 ("achievement of own goals and objectives from the professional development"), the "4", "3" and "1" years groups produced similar patterns, but the lowest ratings were for "2" years and "less than 1 year" groups. The results for Question 16 ("impact on student learning outcomes") are similar to those for Question 15.

Apart from the findings for the "2 years" group, the overall pattern for these results would suggest that assessment experience is a factor in determining the ratings for the six questions. It is hard to offer a clear-cut explanation of the results for the "2 years" group, although it should be noted that the timing of their pre-service study (2003) and their beginning of teaching fell between the available professional learning opportunities for NCEA. Possibly they had less experience of professional development and training for NCEA than the group that followed.

Details for the six questions are summarised below. For simplicity, ratings are only shown for the groups that obtained highest and lowest percentages on the "5+4" category. The line that immediately follows shows the overall "mean ratings" for each group on the question concerned; this statistic needs to be treated as "indicative only" of the differences between the five groups.

Question 7: Confidence in accurately assessing for NCEA

Ratings of "5+4": Percentages ranged from 91.2 ("3 years") to 31.0 ("< 1 year")
Mean ratings: 4.7 (4 yrs), 4.8 (3 yrs), 4.3 (2 yrs), 4.0 (1 yr), 3.3 (< 1 yr)
Chi-square = 91.26, df = 8, p < .01

Question 15: Achievement of own goals and objectives from latest PD for NCEA

Ratings of "5+4": Percentages ranged from 46.6 ("4 years") to 26.8 ("2 years")
Mean ratings: 3.6 (4 yrs), 3.6 (3 yrs), 3.0 (2 yrs), 3.7 (1 yr), 3.1 (< 1 yr)
Chi-square = 17.91, df = 8, p < .05

Question 16: Impact of latest PD for NCEA on student learning outcomes

Ratings of "5+4": Percentages ranged from 58.5 ("4 years") to 34.1 ("2 years")
Mean ratings: 3.9 (4 yrs), 3.7 (3 yrs), 3.4 (2 yrs), 4.1 (1 yr), 3.2 (< 1 yr)
Chi-square = 23.19, df = 8, $p < .01$

Question 17: Impact of latest PD for NCEA on the quality of your teaching

Ratings of "5+4": Percentages ranged from 40.4 ("4 years") to 29.3 ("2 years")
Mean ratings: 3.4 (4 yrs), 3.3 (3 yrs), 2.7 (2 yrs), 3.2 (1 yr), 2.9 (< 1 yr)
Chi-square = 17.38, df = 8, $p < .05$

Question 20: Rate your knowledge in assessing NCEA for your first subject area

Ratings of "5+4": Percentages ranged from 83.5 ("4 years") to 33.3 ("< 1 year")
Mean ratings: 4.6 (4 yrs), 4.6 (3 yrs), 4.1 (2 yrs), 4.4 (1 yr), 3.4 (< 1 yr)
Chi-square = 52.49, df = 8, $p < .01$

Question 22: How easy has it been to apply the latest PD for NCEA to your teaching

Ratings of "5+4": Percentages ranged from 43.4 ("4 years") to 15.8 ("< 1 year")
Mean ratings: 3.5 (4 yrs), 3.2 (3 yrs), 2.7 (2 yrs), 3.3 (1 yr), 2.4 (< 1 yr)
Chi-square = 26.23, df = 8, $p < .01$

Cross-tabulations with factors linked to NCEA assessment experience (Question 6c)

Question 6c asked participants who had less than four years experience of assessing for NCEA to classify themselves under one of the following headings:

- new to teaching
- new to teaching in New Zealand
- returning to teaching
- other

Cross tabulations involving the results for questions 7, 9, 14-20, and 22 with these four sub-groups of participants failed to identify any significant differences. In other words, these four groups tended to rate questions sufficiently similar to discount any differences being of a systematic nature. However, not surprisingly, when the "rest" of the teachers (those who had "4 years" of experience) are included as a group, significant differences emerge on seven of the 10 Questions (nos. 7, 14, 15, 16, 17, 20, and 22). In all cases, the "4 years" group provided higher ratings overall. Since these results are not surprising, further details are not presented.

Cross-tabulations with subjects (Question 3)

For reasons of continuity, the same five subjects analysed in the pre-questionnaire were chosen for analysis from the post-questionnaire, namely: English, Maths, Physical Education, Science, and Technology. The cross-tabulations with three of the questions identified significant results (Questions 7, 20 and 22). In all cases, English and Maths teachers provided higher ratings than the teachers from the other three subjects. In other words English and Maths teachers were more confident in assessing accurately for NCEA (Question 7), rated themselves more highly in their knowledge for assessing their first subject area (Question 20), and found it easier to apply new knowledge and insights from their latest professional development to their teaching (Question 22).

As noted in the summary of the findings from the pre-questionnaire, the important point from these results is that because differences sometimes occur between subjects, it is important for the design of professional development programmes to take cognizance of subject-based preferences and styles.

The results for the three questions are given below:

Question 7: Confidence in accurately assessing for NCEA

Ratings of "5+4": Percentages ranged from 92.3 (Maths) to 62.1 (Physical Education)
Mean ratings: English (4.5), Maths (4.8), PE (4.2), Science (4.2), Technology (4.3)
Chi-square = 18.88, df = 8, $p < .05$

Question 20: Rate your knowledge in assessing NCEA for your first subject area

Ratings of "5+4": Percentages ranged from 90.1 (English) to 63.0 (Physical Education)
Mean ratings: English (4.7), Maths (4.7), PE (4.3), Science (4.2), Technology (4.2)
Chi-square = 24.76, df = 8, $p < .01$

Question 22: How easy has it been to apply the latest PD for NCEA to your teaching
Ratings of "5+4": Percentages ranged from 50.0 (English) to 13.6 (Technology)
Mean ratings: English (3.7), Maths (3.6), PE (3.4), Science (2.8), Technology (2.6)
Chi-square = 15.49, df = 8, $p \leq .05$

Cross-tabulations by schools **(Question 1)**

The purpose of this analysis is simply to identify whether school differences exist. Because schools cannot be identified, the results have no particular value other than to note that professional development programmes need to recognise the different preferences and reactions of schools in their design.

For this analysis, only schools which returned at least 30 questionnaires were included. Six schools met this criterion of inclusion, with responses ranging from 64 questionnaires to 30.

Significant differences between these schools were found for eight of the 10 questions, namely Questions 14-20 inclusive, and Question 22. For all eight questions the probability associated with the result was $p \leq .01$; this indicates a strong pattern in the results, confirming the need to recognise each school's context and preferences in designing professional development.

Influence on content and delivery of Professional Development for NCEA (Question 10)

Question 10 sought information on the extent to which participants felt that they had influenced the content and delivery of their latest professional development for NCEA. The question comprised five items which are listed in Table 5.16 along with their corresponding frequencies and percentages.

Table 5.16: Teachers' influence on their latest PD for NCEA (Question 10)

Item	Frequency and percentage*			Modal category (%)
	very much so "5+4"	to some extent "3"	not at all "2+1"	
1. I was personally asked what my NCEA learning needs were	111 31.8	89 25.5	149 42.7	Rating = 1 (29.8)
2. I was unaware of the PD until it happened	37 11.1	62 18.6	234 70.3	Rating = 1 (57.7)
3. I felt my expressed learning needs were met	137 39.4	106 30.5	105 30.2	Rating = 3 (30.5)
4. I felt that I was part of the process that decided on the PD	89 26.0	79 23.1	174 50.9	Rating = 1 (33.3)
5. I was able to have input if I wanted it	173 49.3	84 23.9	94 26.8	Rating = 5 (25.4)

* Percentages are based on the number of respondents who answered each item.

The overall pattern from Table 5.16 is indicative of "partial" consultation with teachers regarding the content and delivery of their latest professional development for NCEA. For three of the four items that are worded "positively" (1, 3 and 5), the majority of participants were at least moderately ("to some extent") positive about their consultation. However, there was still a sizeable percentage of respondents who felt that they had not been adequately consulted. For example, the modal categories for Items 1 and 4 on the full 5-point scale were "1". These findings are offset by the results for Items 2 and 5; for the former, only a small percentage of respondents (11.1%) indicated that they were unaware of the professional development until it happened, while the majority of respondents (nearly 75%) felt that they were able to have input, at least to some extent, had they wanted to provide it (Item 5).

Effectiveness of some aspects of the latest PD for NCEA (Question 21)

Question 21 sought information on the effectiveness of the latest professional development in respect of its content (coverage and relevance of topics), process (facilitation and organisation), context (relevance to the teachers' situation), and materials (if provided). Results for these four items are summarised in Table 5.17.

The results indicate a very consistent pattern across the four items. In all cases the percentages are highest for the "5+4" category, then the "3" category, and lowest for the "2+1" category. The modal category for each item is "4". The results therefore suggest a good deal of teacher satisfaction with the latest professional development. The one point of concern is that the percentage of dissatisfied teachers (around 17% on the first three items) is a little high when one considers that the aim should be to achieve successful outcomes for all participants. Nevertheless, the results in Table 5.17 are clearly positive overall.

Table 5.17: Effectiveness of latest PD: content, process, context, and materials (Question 21)

Item	Frequency and percentage*			Modal category (%)
	effective "5+4"	partially effective "3"	not effective "2+1"	
1. Content (coverage & relevance)	228 55.9	112 27.5	68 16.7	Rating = 4 (39.2)
2. Process (facilitation & organisation)	230 56.7	108 26.6	68 16.7	Rating = 4 (38.9)
3. Context (relevance to own teaching)	214 52.2	126 30.7	69 16.8	Rating = 4 (33.7)
4. Materials (if relevant)	175 46.8	110 29.4	89 23.8	Rating = 4 (32.1)

* Percentages are based on the number of respondents who answered each item.

Changes to thinking and practices (Question 23)

Question 23 identifies the extent to which the thinking and practices of teachers have changed as a result of the latest professional development for NCEA. Three items are included: theoretical understanding of assessment; assessment approaches and strategies; and confidence in making assessment judgments. Table 5.18 contains the relevant data.

Table 5.18: Changes to thinking and practices arising from the latest PD for NCEA (Question 23)

Item	Frequency and percentage*			Modal category (%)
	very much so "5+4"	to some extent "3"	not at all "2+1"	
1. Theoretical understanding of assessment	110 27.4	157 39.1	135 33.6	Rating = 3 (39.1)
2. Assessment approaches and strategies	121 30.1	166 41.3	115 28.6	Rating = 3 (41.3)
3. Confidence in making assessment judgments	125 31.0	158 39.2	120 29.8	Rating = 3 (39.2)

* Percentages are based on the number of respondents who answered each item.

In all cases the "to some extent" category was rated the highest (around 40% for each item). The percentages for "very much so" and "not at all" are very similar. The conclusion reached is that overall the professional development has had some impact on changing teachers' thinking and practices. However, it would be unfair to describe the professional development as being only "moderately" successful based on these figures; unfortunately there is no pre-questionnaire data for comparison—some of the "not at all" group may already have had good understanding and skills in relation to the theory and practice of assessment.

Characteristics of professional development (Questions 24, 25 and 26)

Results for Question 24

Question 24 asks teachers to rate a list of characteristics of professional development for their importance, and then asks the teachers to provide a second rating in relation to their experiences of the most recent professional development for NCEA. Table 5.19 sets out the relevant data. For reasons of brevity, frequencies have not been reported (only percentages) but the number responding to each item is shown in the column labelled "mean rating". Also, the wording of items has been abbreviated but each still gives the focus of what was asked. As in the discussion of earlier tables, the mean rating should be treated as "indicative only" of the overall rating for each item.

Table 5.19: Characteristics of professional development (Question 24)

Item	Rating of importance (%)*				Rating of recent PD experience (%)*			
	very import. "5+4"	some import. "3"	little import. "2+1"	N: Mean Rating	very much so "5+4"	to some extent "3"	not at all "2+1"	N: Mean Rating
1. PD covered what I wanted/needed	62.4	27.0	10.6	396 3.8	42.5	31.5	26.0	381 3.2
2. PD provided new knowledge of theory & practices	53.7	33.1	13.2	393 3.6	31.8	39.4	28.9	381 3.0
3. PD led me to examine my own teaching	57.7	29.7	12.6	397 3.7	35.5	36.1	28.4	380 3.0
4. PD involved collecting & analysing own data	35.1	37.7	27.2	393 3.1	25.3	28.9	45.8	380 2.6
5. PD fostered critical reflection & challenged beliefs	45.7	36.3	18.0	394 3.4	31.3	35.0	33.7	383 2.9
6. PD supported practice that is inclusive	51.2	31.1	17.7	389 3.4	33.7	34.2	32.1	377 3.0
7. PD helped me to change practices, beliefs & attitudes	35.0	41.2	23.8	391 3.1	21.1	36.6	42.4	380 2.6
8. PD empowered me to further my own PD	49.5	32.2	18.3	394 3.4	30.5	34.6	34.9	384 2.9
9. PD improved my practice	58.1	26.5	15.4	396 3.6	34.6	33.9	31.5	381 3.0
10. PD developed my confidence	52.2	30.8	17.0	393 3.5	31.3	38.4	30.3	380 2.9

* Percentages are based on the number of respondents who answered each item.

Table 5.19 indicates that Items 1, 2, 3 and 9 were considered to be the most important. Written in full, these items covered:

- Item 1: "the professional development acknowledged what I wanted and needed";
- Item 2: "the professional development provided new knowledge covering theory, content or alternative practices";
- Item 3: "the professional development engaged me in examining good teaching in my own setting";
- Item 9: "the professional development improved my practice".

The items considered to be least important were:

- Item 4: "The professional development involved the collection and analysis of data from my own setting"; and
- Item 7: "The professional development helped me to change practices, beliefs and attitudes".

The last of these possibly indicates that teachers see their NCEA professional development more as serving specific purposes (e.g., those linked to their needs) rather than a more general raising of awareness and knowledge about assessment. In other words, the focus of ratings may be on "utility" rather than deeper issues of theory or philosophy.

In relation to the teachers' experiences of their latest professional development, the same items generally received the highest and lowest ratings, but all ratings were clearly lower for "experience" compared to "importance". For example, differences on the "5+4" category ranged from 9.8% (Item 4) to 23.5% (Item 9), while mean differences ranged from 0.4 (Item 6) to 0.7 (Item 3). That the rating of "experience" should not match the rating of "importance" is as expected, however, the main point perhaps is that the ratings of experience typically centre on "to some extent" with sizable percentages (26.0 to 42.4) also being recorded for "not at all". These figures suggest that there is clearly scope for increased teacher satisfaction in respect of the most recent NCEA professional development.

Results for Question 25

Question 25 focuses on additional characteristics of professional development, but this time teachers were asked to rate only their experiences. The results are summarised in Table 5.20. For continuity with Table 5.19, percentages are shown without the associated frequencies, and the final column shows the mean rating and number of respondents who answered each item.

It is evident from the results for Question 25, that Item 3 ("working collaboratively with colleagues") and Item 1 ("improving students' learning outcomes") were considered the most effective experiences from the teachers' recent professional development. These items have the highest percentages under the "5+4" column and the highest mean ratings. At the other end of the scale, Item 9 ("meeting the needs of low performing students") is the least highly rated characteristic. As noted from the discussion of Table 5.19, the figures in Table 5.20 similarly suggest that there is scope for increased teacher satisfaction in relation to their most recent NCEA professional development.

Table 5.20: Further aspects of professional development (Question 25)

Item	Rating of experience* (%)			Mean Rating (N)
	effective "5+4"	partially effective "3"	not effective "2+1"	
1. Improving students' learning outcomes	46.9	29.8	23.3	3.3 (399)
2. Improving your teaching capability	38.8	34.3	26.8	3.1 (399)
3. Working collaboratively with your colleagues	56.4	24.7	18.9	3.5 (397)
4. Meeting the diverse needs of students	32.8	33.5	33.8	2.9 (400)
5. Meeting the needs of high performing students	35.9	30.2	33.9	3.0 (398)
6. Focusing on school goals	35.1	29.6	35.4	2.9 (397)
7. Clarifying assessment judgments	41.9	28.9	29.2	3.1 (394)
8. Meeting the needs of students in the middle	32.2	36.5	31.2	2.9 (397)
9. Meeting the needs of low-performing students	26.6	32.7	40.6	2.7 (394)

* Percentages are based on the number of respondents who answered each item.

Results for Question 26

Question 26 includes another 11 items related to factors potentially associated with effective professional development. In this question, teachers were asked to rate the importance of each factor then give a ranking of the top four items in respect of their most recent experience of professional development for NCEA. Results are shown in Table 5.21. The first five columns display data similar to that just shown for Table 5.20; the remaining column contains details of the ranking of items.

Results from Table 5.21 parallel closely those from Question 16 of the pre-questionnaire (Table 5.8) in respect of the order of importance of items, although higher ratings were generally provided in the pre-questionnaire. Item 1 ("content that meets teachers' needs") and Item 4 ("facilitators that know the teachers' context and needs") were rated most important overall, while Items 2, 6, 7, 8, 9, 10 and 11 all received strong ratings. Item 5 ("using the school as the venue") and Item 6 ("utilising workshops/short courses") were the least important requirements of effective professional development. Clearly the mean ratings reflect the ratings provided under the "5+4" column—typically those items with highest percentages for "major importance" also received highest mean ratings.

For the ranking provided in the final column, teachers were asked to consider their most recent professional development undertaken for NCEA. Highest rankings were obtained for the items that the respondents most highly valued as identified in their ratings (Items 1 and 4) and lowest values for the items they least valued (Items 5 and 6). These results are therefore somewhat reassuring. Generally, the findings for Question 26 are far more positive than those for Questions 24 and 25.

Table 5.21: Characteristics of professional development: importance and ranking (Question 26)

Item	Rating of importance (%)				% for Rank=1 & (unranked); mean rank
	major importance "5+4"	of some importance "3"	minor importance "2+1"	Mean Rating (N)	
1. Being offered content that meets my needs in my subject area	75.1	17.1	7.8	4.2 (386)	27.5 (42.5) 3.2
2. Preparing key programme goals and objectives	65.9	22.6	11.5	3.9 (381)	11.4 (59.3) 3.9
3. Having a team approach	54.7	29.2	16.1	3.6 (380)	10.2 (60.3) 4.0
4. Having facilitators that know the context and needs of participants	83.8	9.7	6.5	4.4 (383)	27.2 (37.1) 3.1
5. Using the school as the main venue	30.1	29.8	40.1	2.8 (379)	5.9 (78.5) 4.5
6. Utilising workshops/short courses	41.8	39.9	18.3	3.3 (371)	4.8 (79.0) 4.5
7. Stating clear outcomes for participants	67.3	22.1	10.7	3.9 (378)	6.2 (62.0) 4.1
8. Keeping everyone focussed, including facilitators	70.5	20.9	8.5	4.0 (379)	4.8 (63.2) 4.2
9. Ensuring adequate time for reflection on new ideas	63.2	25.0	11.9	3.8 (382)	7.4 (65.4) 4.2
10. Having opportunity in PD to apply new ideas in practice	60.6	25.0	14.4	3.7 (377)	10.8 (58.1) 4.0
11. Getting feedback on what I am doing	58.5	28.4	13.2	3.7 (375)	8.5 (68.0) 4.3

* Percentages based only on those who responded to each item.

Desired characteristics of facilitators (Questions 27, 28 and 29)

Results for Question 27

Question 27 asked teachers to identify who facilitated their latest professional development: a school staff member, a subject specialist, a practising teacher from another school, an adviser, or "other". The main findings were:

- A staff member at my school: 43.9%
- A subject specialist: 31.8%
- A practising teacher from another school 17.1%
- An adviser 30.1%
- Other 8.4%

Under "other", respondents identified people who in fact could also have been classified by one of the specified categories above. For example, five people listed their head of department, and three provided answers identifying a team approach within their school. A further two identified a team approach using school clustering in their subject, four identified a university lecturer, three listed School Support Services advisers, three listed guest speakers (two from overseas), and two identified specialists—one a curriculum coordinator and the other an expert in learning styles.

Results for Question 28

Question 28 lists 10 characteristics associated with facilitation and asks teachers to rate their importance and the extent to which these characteristics were experienced by teachers during their latest professional development. The items included in Question 28 parallel those asked in Question 19 of the pre-questionnaire (see Table 5.11). Results are shown in Table 5.22.

Table 5.22: Desired characteristics of facilitators: importance and experience (Question 28)

Characteristics of the facilitator:	Rating of importance (%)*				Rating of recent PD experience (%)*			
	very import. "5+4"	some import. "3"	little import. "2+1"	N: Mean Rating	very much so "5+4"	to some extent "3"	not at all "2+1"	N: Mean Rating
1. Good knowledge of theory about pedagogy	80.5	14.5	5.0	339 4.3	67.6	22.8	9.6	312 3.9
2. Good practical expertise in teaching my subject	81.1	12.0	6.9	333 4.3	60.8	21.7	17.5	309 3.7
3. Good communication and relationship skills	84.2	11.0	4.8	336 4.3	70.8	20.2	9.0	312 4.0
4. Good reflective skills	66.3	25.1	8.7	335 3.9	52.6	30.6	16.8	304 3.5
5. Ability to challenge thinking and practice	63.5	28.7	7.8	334 3.9	47.7	33.4	18.8	308 3.4
6. Good research skills in collecting & interpreting data	51.8	34.6	13.6	332 3.6	48.2	29.4	22.4	299 3.4
7. Good at keeping us on track	70.2	22.6	7.1	336 3.9	60.1	26.6	13.3	308 3.7
8. Good follow-up and feedback skills	54.8	33.2	12.0	334 3.6	42.5	33.2	24.3	301 3.2
9. Good knowledge of our school's needs	60.6	22.1	17.3	335 3.7	50.7	26.6	22.7	304 3.4
10. Ability to model good educational practice	72.5	20.4	7.2	334 4.0	57.4	27.4	15.2	310 3.6

* Percentages are based on the number of respondents who answered each item.

In relation to the rating of item importance, the percentages show some similarities with the results from the pre-questionnaire in that all items achieved at least a 50% rating for the "5+4" (very important) category. Items with the strongest ratings include: "good communication and relationship skills" (Item 3); "good practical expertise in teaching my subject" (Item 2); and "good knowledge of theory about pedagogy" (Item 1). Items with the lowest ratings include: "good research skills in collecting and interpreting data" (Item 6), and "good follow-up and feedback skills" (Item 8). The rating for the latter item possibly reflects the reality that follow-up is not often possible because it is either not practical or has not been built into the design of the professional development.

Not surprisingly, the ratings by teachers of their recent professional development experience are lower that their ratings for perceived importance. However, the difference is not as large as might have been expected. Differences range from 20.3% (Item 3) to 3.6% (Item 6); the differences between the means for the two sets of data provide a similar pattern. Given that seven out of the 10 items, when rated for recent experience, achieved percentages over 50% for the "5+4" category, it would seem safe to conclude that most teachers were satisfied with the quality of the facilitation they received.

Results for Question 29

Question 29 lists five further characteristics associated with facilitation and asks teachers to rate their recent professional development in respect of these characteristics. Results are shown in Table 5.23.

Table 5.23: Additional aspects of facilitation: rating of recent experience (Question 29)

Item	Rating of experience* (%)			Mean Rating (N)
	very much so "5+4"	to some extent "3"	not at all "2+1"	
1. The facilitator was generally knowledgeable in areas important to you	72.4	20.5	7.1	4.1 (337)
2. The facilitator was helpful in assisting you to apply this knowledge	60.3	22.4	17.3	3.7 (335)
3. The facilitator was able to encourage discussion	67.7	21.4	11.0	3.9 (337)
4. The facilitator was sensitive to time requirements for applying new learning	57.8	26.2	16.0	3.7 (332)
5. The facilitator was effective at encouraging self reflection	48.7	31.0	20.3	3.5 (335)

* Percentages are based on the number of respondents who answered each item.

Again, all characteristics are rated positively, with item 1 providing the highest ratings and item 5 the lowest. These results add to the general conclusion that, for the most part, teachers were satisfied with the quality of the facilitation they experienced, although a minority of teachers (around 15%, averaged over the five items) reported negatively on their experiences.

Summary of the Findings from the Post-questionnaire

The main findings from the post-questionnaire are summarised as follows:

- Question 8 identified that school-based professional development, curriculum workshops, teacher networks, National Scholarship workshops, conferences, and short courses, were the most common forms of professional development undertaken in 2005.
- Questions 7, 9 and 20 confirmed the finding from the pre-questionnaire that teachers are generally confident about their knowledge and skills in assessing for NCEA but still give importance to attending professional development for NCEA.
- Questions 15-19 and 22 identified that teachers were moderately (e.g., "to some extent") satisfied with the value of their recent professional development for achieving their own goals, improving their teaching (including gaining new insights and knowledge), increasing their skills in assessing for NCEA, and increasing their understanding of assessment theory and practice. Teachers were generally more satisfied with the pace of presentation of the recent professional development (Question 14).
- The results of the cross-tabulations of Questions 7, 9, 14-20, and 22 with the demographic data identified major variations between schools (on seven of the ten questions) and between the assessment experience of teachers for NCEA (on six questions). In addition, differences were also found between gender (on two questions), between years of teaching experience (two questions), and between

subjects (three questions). Overall, these variations indicate that the design of professional programmes need to consider the school context, subject, gender, and experience of participants.

- Question 10 identified a pattern indicative of "partial consultation" in respect of teachers' contribution to the design and focus of their NCEA professional development. However, most teachers considered that they could have contributed had they felt it necessary.
- Questions 21 and 23 identified strong teacher satisfaction with the content, process, relevance to own context, and the materials provided in relation to their recent NCEA professional development. Teachers were less satisfied, but overall still positive, about the impact of the NCEA on changes to their assessment knowledge, practice and confidence.
- Questions 24-26, which included 30 different items focusing on characteristics of effective professional development, identified that the most important—and most characteristic of the recent professional development experience of teachers—were:
  - being offered content that meets teachers' subject needs
  - having facilitators that know the context and needs of participants
  - keeping everyone focused, and
  - preparing key programme goals and objectives.

  It should be noted that the pre-questionnaire gave less emphasis to "keeping everyone focused".
- Factors given less weight in Questions 24-26 included:
  - using the school as the main venue
  - collecting and analysing the teachers' own class data
  - helping teachers to change practices, beliefs and attitudes

  The last of these suggests that teachers see their NCEA professional development more as serving specific (technical) purposes rather than a general raising of awareness and knowledge about assessment.
- In respect of the final section of the questionnaire (Questions 27-29), which focused on the desired characteristics of facilitators, highest ratings were given to:
  - the facilitator being knowledgeable in areas important to teachers
  - the facilitator being able to encourage discussion
  - the facilitator having good knowledge of theory about pedagogy
  - the facilitator having good practical expertise in teaching the subject, and
  - the facilitator having good communication and relationship skills.

  Factors given less weight by teachers included:
  - the need for the facilitator to have good follow-up and feedback skills, and
  - the need for the facilitator to have good research skills in collecting and interpreting data.
- The general conclusion from the post-questionnaire is that most teachers were at least moderately ("to some extent") satisfied with their recent professional development for NCEA, although ratings indicate that some teachers were less satisfied. However, teachers generally valued the content and process of programmes, as well as the relevance of the professional development to their own teaching context. In their rating of the facilitation of programmes, teachers were generally offered content that met their teaching and assessment needs, and they undertook programmes involving facilitators who had a good knowledge of the context and needs of participants.

Analysis of Qualitative Data from the Pre- and Post-Questionnaires

The data in this section of the report relate to the following open-ended questions:

Pre-questionnaire:

11. Identify the areas, or knowledge/skills that you would like further professional development to cover in relation to NCEA.

20. List the **four** factors which, in your opinion, are the most important in **contributing towards effective PD**.

21. List the **four** factors which, in your opinion, are the most significant **barriers** to effective PD.

Post-questionnaire:

11. What were the aims of the professional development that you attended?

12. List up to **three** factors which, in your opinion, contributed **most** towards the effectiveness of the latest PD for NCEA.

13. List up to **three** factors which, in your opinion, contributed **least** towards the effectiveness of the latest PD for NCEA.

For the purposes of reporting the results from these analyses, Question 11 from both questionnaires is discussed under the next sub-section, and Questions 20 and 21 from the pre-questionnaire, along with Questions 12 and 13 from the post-questionnaire, are discussed under the following sub-section. The procedures used to analyse the data are described separately in each sub-section; the main difference is that the data in the first sub-section were analysed manually, whereas the data in the second sub-section were entered into the software package known as *Qualitative Software and Research (QSR) N6*.[14]

Analysis of Question 11 in each questionnaire: desires and aims

This section compares what teachers said they would like their NCEA professional development to focus on ("desired") with what the professional development actually delivered. Because responses to questionnaires were anonymous, it was never intended that the comments of teachers on the pre-questionnaire would be directly matched with their comments on the post-questionnaire. It is therefore possible, for example, that 5% of the pre-sample might indicate a preference for "resource development" and that 5% of the post-sample might say the aim of their professional was "to develop resources"; this looks like a very good match, but it is also possible that the 5% who wanted resource development actually got something quite different (e.g., training in how to operate the school's software for recording internal assessment results), while the 5% who were involved in resource development actually wanted to develop their skills in writing assessment tasks. The results reported below should be interpreted with the recognition that pre- and post-questionnaire matching of the samples did not take place.

[14] This software was previously known as QSR NUD*IST (see www.qsrinternational.com for more information).

The steps followed in analysing the two open-ended questions were:

- Comments from each questionnaire were typed into a text document ready for coding.
- Two researchers coded a sample of comments/statements from the first questionnaire, creating categories under which each statement could be coded.
- The categories identified were modified during this trial period until the coding stabilised.
- For the pre-questionnaire, nine categories were identified; for the post-questionnaire, the same nine categories were able to be used again, but a further two categories were added.
- One of the researchers then coded all statements from both questionnaires into their respective categories. During the process, the second researcher also coded a sample of statements involving a total of 242 classifications. The classification of the two researchers was then compared; they agreed on the coding of 222 statements (91.7% agreement). Following discussion of the differences, it was recognised that nine of the 20 differences were due to a different interpretation of one aspect each of two categories; with these interpretations resolved, agreement rose to 95.5%. This was considered to be an acceptable level of agreement.
- It should be noted that a single statement could be coded into two or more categories. For example a statement such as “network with teachers from other schools to develop assessment resources” comprises both a theme of “networking” and a theme of “resource development”; it is possible to network for reasons other than resource development, and it is possible to develop resources without networking with other schools.

Table 5.24 sets out the categories and their brief descriptions as identified in the coding process. The main findings in relation to each category are now described.

Resources

Resources or resource development was the theme of 8.5% of classifications in the pre-questionnaire and 7.4% in the post-questionnaire. Teachers making these statements in the pre-questionnaire, expressed a strong need for more resources for both teaching and assessing, including more exemplars, more materials, more on-line availability of such resources, and the need to network and share with other teachers current resources or to co-develop with them common resources. The post-questionnaire reported that this range of activities had been undertaken during NCEA professional development courses/days. Resources and resource development was a theme common to a large number of content areas.

Moderation

Moderation was the theme of 5.3% of classifications in the pre-questionnaire and 5.5% in the post-questionnaire. Underpinning this theme was the expressed need of teachers to have a better understanding of how “internals” are graded, how criteria are interpreted consistently, whether schools “down the road” are applying the same standards, how differences can be resolved, and how external and internal assessments can be related.

Table 5.24: Categories and descriptions for teachers' comments: Question 11 (pre- & post-)

Category	Description
Resources (pre- & post-questionnaire)	covers resource development, need for resources, exemplar development, using exemplars, and having expert advice available (human resources)
Moderation (pre- & post-questionnaire)	covers reference to moderation, moderation reports, ensuring consistency, comparing marks to ensure same standards apply
Mechanics of assessment (pre- & post-questionnaire)	covers task development, assessing student work, marking, interpreting standards, interpreting criteria (excellence/merit/achieved), standardising procedures, applying or understanding resit policy
Understanding NCEA & changes (pre- & post-questionnaire)	covers introduction to understanding NCEA (e.g, for new teachers), general coverage of features of NCEA, changes to standards that need to be understood, and upskilling/updating of knowledge about NCEA
Levels (pre- & post-questionnaire)	covers any reference to the levels of NCEA (1-3), Scholarship, or the use of unit standards, but **not** levels in the sense of excellence, merit and achieved; usually coded in conjunction with another category (e.g., level 1 resources)
Content of curriculum, subject or teaching (pre- & post-questionnaire)	covers references to content of curriculum, subjects or teaching (e.g., algebra, literacy, numeracy, language, 3D, drawing, transactional writing); or references to an actual subject (English, Technology, History)
Student focus (pre- & post-questionnaire)	covers direct references to students or "learning" (not "teaching"); examples include "improving student achievement", "student learning", "developing higher order thinking", "motivating students", "managing behaviour"
Networking (pre- & post-questionnaire)	covers references to networking, sharing, clustering, discussing with other schools, team building, collaborating
Other/operational (pre- & post-questionnaire)	covers mostly references to operational matters (e.g., using school's system for recording results, departmental planning); also includes small number of "one-off" comments that are hard to interpret (e.g., "planning")
Reviewing, reflecting (mainly post-questionnaire)	covers major reviewing activities, such as "reviewing results for 2005", or reflecting in the sense of "taking stock" or "where we are at"; found mainly in the post-questionnaire
Not clear, don't know, can't remember, never turned up (only post-questionnaire)	covers responses that indicate the respondent could not recall the aims of the NCEA professional development, or found them unclear, or reported that the facilitator did not show up

Mechanics of assessment

Mechanics of assessment was the strongest theme in both questionnaires (31.9% of statements in the pre-questionnaire and 24.7% in the post-questionnaire). Many of the statements in both questionnaires focused on the main elements of assessment practice: task development, conducting assessments, marking/grading, interpreting criteria and standards, dealing with authenticity, and so on. These are the nuts and bolts of assessment. The percentages for each questionnaire may be bolstered a little—the decision was made to code under this category statements that were somewhat brief but suggestive of nuts and bolts activities (e.g., "assessment analysis", "work on internal assessment"; "to work on NCEA assessments").

Understanding NCEA and changes

This theme focused on statements that implied the need for, or coverage of, a more general or introductory treatment of assessment for NCEA (i.e., less specific or intensive than a nuts and bolts coverage). This theme also included professional development dealing with the need for teachers to update or upskill themselves on changes to standards or other features of the system. Statements in the pre-questionnaire covered 6.8% of classifications while statements in the post-questionnaire covered 9.8% of classifications. A small number of responses in the pre-questionnaire raised the issue of a possible level of frustration relating to communication of changes (e.g., "An early alerting

system to changes and being unskilled in these changes"). However, most statements were non-emotive (e.g., "information about changes", and "update of changes").

Levels

This theme focused on statements that included specific reference to one of the levels of NCEA, or Scholarship, or unit standards. The reason for including "levels" as a category of information is that it identifies that the professional development should be, or was, targeted at a specific level. The "level" provides additional information. For example, given the interest reported earlier (from one of the case study schools) for having professional development related to Scholarship made available, it is relevant to note that 2.4% of classifications from the pre-questionnaire indicated a desire for such professional development, while 3.1% of classifications from the post-questionnaire indicated that such development was provided. Overall, 12.9% of classifications in the pre-questionnaire, and 11.2% in the post-questionnaire, included a "level" focus; this was the third highest classification in both questionnaires.

Content of curriculum, subject or teaching

This category covers references to the content of curriculum, subjects or teaching (e.g., algebra, literacy, numeracy, language, 3D, drawing, transactional writing), or references to an actual subject (English, Technology, History). The significance of this heading is that, like "level", it narrows the focus of the professional development in assessment—in this case to a particular area of the curriculum or subject. Of significance is that this category also identified that some of the professional development undertaken was not directly about assessment but about teaching the curriculum or subject content, or designing courses, in the context of NCEA. There is nothing unusual about this—it is well recognised that "high stakes" assessment has a strong backwash effect on teaching and course design. Statements coded under the "content" category accounted for 22.3% of pre-questionnaire classifications and 16.2% of post-questionnaire classifications; this was the second highest classification in both questionnaires.

Student focus

This category covers references to students or "learning" (as distinct from "teaching"). This category is of interest because it gives some indication of the extent to which students are explicitly, as opposed to implicitly, the prime focus of professional development. The researchers recognise that most teachers see that the end benefit of their professional development is about improving the learning or educational experiences of students. However, there were relatively few statements of the following kind, as identified in the pre-questionnaire:

> *Strategies for raising student performance to higher levels of achievement.*
>
> *Increasing student motivation.*
>
> *How to encourage more flexible independent thinking from students.*

Statements coded under "student focus" accounted for 3.8% of pre-questionnaire classifications and 7.2% of post-questionnaire classifications.

Networking

This theme is of interest because it highlights the importance that some teachers place on being able to share resources and ideas with colleagues from other schools or via on-line communication. To the extent that "clustering" is currently a model or approach to professional development that has strong supporters (e.g., Ham, 2005), it is perhaps a little disappointing for this viewpoint that networking was a theme in only 4.4% of pre-questionnaire classifications and 6.3% of post-questionnaire classifications.

Other/operational

This category is the remaining one that covers both the pre- and post questionnaires. As indicated in Table 5.24, most of the statements contributing to this classification involved professional development related to "operational" or "organisational" developments. For example, it included coverage of school systems for managing NCEA as well as computer systems for recording results. Clearly such professional development is valuable from the perspective of ensuring that accurate information about students and the standards they are taking is recorded, along with ensuring that teachers follow standardised procedures for the various management issues that might otherwise arise. Statements coded under this category accounted for 3.7% of pre-questionnaire classifications and 2.0% of post-questionnaire classifications.

Reviewing/reflecting

Apart from three statements in the pre-questionnaire, the theme of reviewing arose only in the post-questionnaire. This category covers major reviewing activities, such as "reviewing results for 2005", or reflecting in the sense of "taking stock" or "where we are at". In two statements there is a reference also to the need to improve school or departmental results in NCEA. Statements coded under this category accounted for 4.5% of post-questionnaire classifications.

Not clear, don't know, can't remember, coordinator never turned up

This category refers to responses in the post-questionnaire that indicate that a teacher could not recall the aims of the professional development, or found them unclear, or in some way indicated that the experience was unsatisfactory because of its lack of purpose or direction. The heading for this category identifies some of the comments that were made. Some participants noted in their comments that the facilitator had not, in fact, turned up to the meeting. The following comments are further examples of statements classified under this category:

> *Unknown—we had no facilitator. Thought it was to confirm changes to curriculum and assessment this year.*
>
> *Not sure. The lady that took it just listened to the dominant people of the group—the people she actually knew. Only focussed mainly on Level 3.*
>
> *I don't know...was poorly organised and the facilitator was rude and uninformed.*

Statements coded under this category accounted for 5.1% of post-questionnaire classifications.

Summary

Table 5.25 summarises the statistical information from the analysis of Question 11 of each questionnaire. For each category, the frequency and percentage of classifications are provided.

Table 5.25: Distribution of the focus of professional development: Question 11 (pre- & post-)

Category	Pre-questionnaire		Post-questionnaire	
	Frequency	Percentage*	Frequency	Percentage*
Resources	110	8.5	36	7.4
Moderation	69	5.3	27	5.5
Mechanics of assessment	411	31.9	121	24.7
Understanding NCEA & changes	88	6.8	48	9.8
Levels	167	12.9	55	11.2
Content of curriculum, subject ...	288	22.3	79	16.2
Student focus	49	3.8	35	7.2
Networking	57	4.4	31	6.3
Other/operational	48	3.7	10	2.0
Reviewing, reflecting	3	0.2	22	4.5
Not clear, don't know ...	Nil	Nil	25	5.1
Total	**1290**	**100.0**	**489**	**100.0**

* Based on total number of classifications (column total).

The main point from this analysis is that "mechanics of assessment", "content of curriculum..." and "levels" accounted for the most classifications of teachers' statements. Since the "mechanics of assessment" is about the nuts and bolts of assessment, it appears that the prime focus of the professional development has been on giving, or enhancing, the assessment knowledge and skills of teachers for operating NCEA. On the surface, it would also appear that what was desired in the way of professional development was what was received—the percentages for the two questionnaires align reasonably well. However, the warning comment given at the start of this analysis should be borne in mind—without actual matching between the two samples, it is not possible to draw firm conclusions on this aspect of data.

Analysis of the positive and negative effects on professional development

As noted in the introduction to this section, the *Qualitative Software and Research (QSR) N6* package was used to analyse the comments of teachers in respect of Questions 20-21 of the pre-questionnaire and Questions 12-13 of the post-questionnaire. This decision was based on the need to consider an alternative approach than that followed for the previous questions; the scope of the work became a consideration.

QSR N6 is designed to assist efficiency and consistency in the analysis of qualitative data. Typically a researcher will first inspect a sample of qualitative comments and devise "categories" which specify key words (or parts of words) and phrases which are then entered into the data file. The data set is then searched for all instances of these key words and phrases, and statements containing these elements are then grouped under their respective categories. The programme includes options which enable researchers to modify initial categories and also measure frequencies associated with each category. Relationships between categories can also be identified. It is generally recommended that

the initial codes be based on an inspection of 200 statements/responses, although variations may be needed to take account of the quantity and nature of the qualitative data. It is also often appropriate to base initial categories on themes identified in the literature, but these categories should be contextualised, and tested for relevance, through the initial inspection of responses.

The following procedures were used to prepare the data for the current study:

- Responses to the open ended survey questions were recorded as Word documents.
- Documents were then uploaded into *QSR N6*.
- A representative sample of approximately 200 surveys from the pre-questionnaire was manually coded by one researcher to identify topic categories and codes (key words/phrases) for subsequent entry into the QSR data set. A second researcher verified the coding and categories from an independent inspection of the sample data. As a result of this step, some of the categories and codes were modified.
- The modified categories and codes were then manually checked against both questions in each survey to identify (at least provisionally) whether the same codes/categories could be applied to all four questions.
- Command files were then created in QSR to undertake analyses of the data (command files are customised instructions which direct QSR to carry out certain actions).
- Several trial "reports" (analyses) were run to familiarise the researchers with the capabilities of the programme in relationship to the data from both questionnaires.
- Following these trials it was found that the same categories could be applied meaningfully (successfully) to both questions in each survey, although further minor modifications were made to categories and codes. (In fact, some of the codes were the same as used for Question 11 of each questionnaire.)
- Specific output reports considered informative for this project were then obtained for each questionnaire, focusing in particular on the classification of statements under each category. These analyses identified both "positive" and "negative" comments associated with each category.

As a result of the above steps, eleven categories were eventually used to classify the data from both questionnaires. These categories, along with a short description of their key themes, are given in Table 5.26.

Table 5.26: Categories for positive and negative features of NCEA professional development

Category	Description
Networking	sharing, networking, external linking, clustering
Mechanics of assessment	methods, assessment for NCEA, moderation, standards, use of exemplars
Facilitation and Process	facilitation and process, quality of facilitator, use of time
Content Control	control, choice, involvement, consultation about content of PD
School based	school-based, department-based, self-based professional development
Relevance	relevance, value, meets needs
Curriculum and subject focus	curriculum/subject focus
Understanding NCEA	focus on understanding more about NCEA
Resources and exemplars	resource development, exemplars as resources
Participant Attitude	participant negativity, participant experience
Time and convenience	location of PD and convenience, time constraints

It should be noted that two of the categories in Table 5.26 merge classifications that were used in the analysis of the previous questions. Mechanics of assessment this time includes “moderation”; similarly, curriculum and subject focus includes statements about both teaching and learning (the latter being more explicitly student focused).

The main findings in relation to each category are described shortly, however the summary tables showing the frequencies and percentages for each category are shown first; this information guides, to some extent, the latter descriptions of each category. The relevant information is provided in Tables 5.27 and 5.28.

Pre-questionnaire

Table 5.27 sets out the statistical findings for the pre-questionnaire in respect of the eleven codes. “Positive” comments relate to statements from Question 20 and “negative” comments relate to Question 21. Frequencies and **two** percentage figures are presented for both positive and negative comments. The first percentage figure relates to the column total while the second percentage relates to the row total. For example, 112 positive statements were made about “networking”; this represents 6.0% of all positive statements made in the pre-questionnaire (based on the column total of 1875), and 60.9% of comments about networking (based on the row total of 184). Both percentage figures are necessary because they provide different information. The column percentage identifies information about the relative importance of the category in contributing positively or negatively to the views of teachers; the row percentage identifies whether the category is more positively or negatively weighted. For example, if “networking” and “participant attitude” are compared, the latter is a more important factor overall because it has higher column percentages. However, “networking” is clearly a more positively weighted feature of participants’ thinking—60.9% of comments about networking are positive compared to 35.3% of statements about “participant attitude”.

Table 5.27: Summary of the classification of statements: pre-questionnaire

Category	Question 20: most important (+)			Question 21: least important (–)			Total	
	freq.	col. %	row %	freq.	col. %	row %	freq.	col. %
Networking	112	6.0	60.9	72	4.3	39.1	184	5.2
Mechanics of assessment	97	5.2	63.4	56	3.3	36.6	153	4.3
Facilitation and Process	311	16.6	50.6	304	18.0	49.4	615	17.3
Content Control	31	1.7	45.6	37	2.2	54.4	68	1.9
School-based	16	0.9	55.2	13	0.8	44.8	29	0.8
Relevance	387	20.6	60.2	256	15.2	39.8	643	18.0
Curriculum focus	301	16.1	61.6	188	11.1	38.4	489	13.7
Understanding NCEA	109	5.8	59.6	74	4.4	40.4	183	5.1
Resources and exemplars	153	8.2	70.5	64	3.8	29.5	217	6.1
Participant Attitude	194	10.3	35.3	356	21.1	64.7	550	15.4
Time and convenience	164	8.7	37.8	270	16.0	62.2	434	12.2
Total	**1875**	**100.0**	**52.6**	**1690**	**100.0**	**47.4**	**3565**	**100.0**

The main points to note about Table 5.27 are that “relevance” of the professional development along with “facilitation and process” and “curriculum focus” are seen by teachers as the most important factors for contributing positively to successful professional development. These results strongly reinforce the findings from the earlier statistical analyses of the two questionnaires, which emphasised that “being offered content that meets teachers’ subject needs” and “having facilitators that know the context and needs of participants”, are items of major importance to teachers. It is interesting that the “mechanics of assessment” are less of an issue in terms of the quality of teachers’ experiences than might be expected from the analyses of Question 11 in each questionnaire, and that “control over content” and having the professional development “school-based” are relatively minor concerns. Being school-based is given less weight than “networking”, although the latter is also not a major concern.

In respect of the negative features of professional development that teachers’ identify as problematic, “participant attitude”, “facilitation and process”, “time and convenience”, “relevance” (or irrelevance), and “curriculum focus” (or lack of such focus), are the major concerns. The appearance of some categories in both the positive and negative columns indicates that such themes can affect both ways the experiences of teachers during professional development. In respect of this point, it is worth noting that the following categories are positively weighted (they have at least 60% of their ratings in the positive column):

- resources and exemplars (70.5%)
- mechanics of assessment (63.4%)
- curriculum focus (61.6%)
- networking (60.9%)
- relevance (60.2%).

"Understanding NCEA" (59.6%) almost reaches this rule-of-thumb criterion. However, at the other end of the spectrum, the following categories are negatively weighted (less than 40% of classifications are in the positive column):

- participant attitude (35.3%)
- time and convenience (37.8%).

These are clearly factors that get in the way of effective professional development; the negativity of some participants can influence the value and experience of other participants, while the scheduling and location of professional development can be a factor that reduces its impact.

Post-questionnaire

Table 5.28 sets out the summary of findings for the post-questionnaire—this information focuses on the actual experiences of teachers during their NCEA professional development.

Table 5.28: Summary of the classification of statements: post-questionnaire

Category	Question 12: most important (+)			Question 13: least important (–)			Total	
	freq.	col. %	row %	freq.	col. %	row %	freq.	col. %
Networking	94	12.1	69.1	42	9.1	30.9	136	11.0
Mechanics of assessment	86	11.1	73.5	31	6.7	26.5	117	9.4
Facilitation and Process	98	12.6	63.2	57	12.3	36.8	155	12.5
Content Control	28	3.6	65.1	15	3.2	34.9	43	3.5
School based	55	7.1	87.3	8	1.7	12.7	63	5.1
Relevance	84	10.8	58.7	59	12.7	41.3	143	11.5
Curriculum focus	121	15.6	68.0	57	12.3	32.0	178	14.3
Understanding NCEA	21	2.7	60.0	14	3.0	40.0	35	2.8
Resources and exemplars	53	6.8	82.8	11	2.4	17.2	64	5.2
Participant Attitude	68	8.8	41.2	97	20.9	58.8	165	13.3
Time and convenience	69	8.9	48.6	73	15.7	51.4	142	11.4
Total	**777**	**100.0**	**62.6**	**464**	**100.0**	**37.4**	**1241**	**100.0**

The first point to note about Table 5.28 is that the actual experiences of teachers overall is more positive than that indicated by the pre-questionnaire results. The "total" percentage of positive classifications in the post-questionnaire (62.6% – see bottom line of Table 5.28) is 10% higher than the corresponding figure for the pre-questionnaire (52.6%). This is a positive result if the pre-questionnaire figures are seen as representing the "usual" experiences of teachers. However, any such comparisons need to acknowledge the possibility that sampling differences could have influenced the results; the higher proportion of heads of department in the post-questionnaire sample may well be a factor in increasing the positivity—people holding this position tend to have more say on the content and delivery of professional development than teachers without this responsibility. This thought should be borne in mind in the later discussion of specific categories.

The categories given the greatest weighting in the "positive" column of Table 5.28 are: "curriculum focus"; "facilitation and process"; "networking"; "mechanics of assessment"; and "relevance". The factors given greatest weighting in the "negative" column are:

"participant attitude"; "time and convenience"; "relevance"; "facilitation and process"; and "curriculum focus". While these results do not replicate exactly the finding from the pre-questionnaire, the two tables show a close alignment about what is important positively and negatively for effective professional development.

In respect of positivity or negativity of categories (the row percentages), the following categories came out as clearly positive overall:

- school-based (87.3%)
- resources and exemplars (82.8%)
- mechanics of assessment (73.5%)
- networking (69.1.9%)
- curriculum focus (68.0%)
- content control (65.1%)
- facilitation and process (63.2%)
- understanding NCEA (60.0%).

While no categories had less than 40% of classifications in the positive column, again the lowest percentages were obtained for participant attitude (41.2%) and "time and convenience" (48.6%).

While there is obvious movement between the results of the pre- and post-questionnaires, there is also some level of consistency. Most of the categories at the top and bottom of the list in each table are the same. However, the appearance of "school-based" as the number one "positivity" category in the post-questionnaire indicates that while only a small group of teachers actually considered this item to be important, their reaction was very positive to having their professional development on site.

Each category is now briefly summarised with a few examples of statements presented to illustrate the findings.

Networking

Pre-questionnaire:	frequency of classifications:	112 (+)	72 (–)
	% of total classifications:	6.0 (+)	4.3 (–)
	% for "positivity"	60.9 (+)	39.1 (–)
Post-questionnaire:	frequency of classifications:	94 (+)	42 (–)
	% of total classifications:	12.1 (+)	9.1 (–)
	% for "positivity"	69.1 (+)	30.9 (–)

The positive aspects of networking focused on sharing, building relationships, designing alternative programmes together, disseminating ideas and being able to make contacts when teaching in an isolated subject. Negative features focused on the need for all participants to be focused, differences between teachers on marking, willingness to share, and the disparity between teachers in their experience.

Positive

- *There were group activities, thus sharing of ideas with other teachers.*
- *Building networks with other schools.*
- *Meeting people in the same teaching area.*
- *Knowing more practices from other teachers in other schools.*
- *Discussions with teachers about alternative programmes.*

- *Bringing teachers from other schools together.*
- *Other teachers at the same day making contacts which is important when you work in an isolated subject area.*
- *Resources brought along by other teachers.*
- *Networking with other schools, especially moderation processes.*
- *Personal links to other NCEA teachers.*

Negative
- *Teachers have different opinion on marking schedules.*
- *We needed to be focusing and some teachers were not well focused.*
- *Not many teachers attended therefore not as much sharing.*
- *Whinging teachers.*
- *Lack of support for teachers i.e. centralised planning.*
- *Negativity of other teachers.*
- *Such huge disparity in the needs of individual teachers—some new to NCEA, no training, some been doing it from the start.*

Mechanics of assessment

Pre-questionnaire:	frequency of classifications:	97 (+)	56 (–)
	% of total classifications:	5.2 (+)	3.3 (–)
	% for "positivity"	63.4 (+)	36.6 (–)
Post-questionnaire:	frequency of classifications:	86 (+)	31 (–)
	% of total classifications:	11.1 (+)	6.7 (–)
	% for "positivity"	73.5 (+)	26.5 (–)

The positive aspects for the category "mechanics of assessment" focused on group marking, moderation, modelling the assessment, practice marking, matching standards to students, sharing data and marking criteria. Negative features focused in particular on differences between teachers in applying criteria, some irrelevant coverage, and lack of time to properly develop exemplars.

Positive
- *Marking of exemplars together.*
- *A number of different strategies were developed for teaching and assessing.*
- *Moderation/cluster marking of sample student work*
- *Modelling the assessment, trying it for ourselves.*
- *Discussions over what constituted NA, merit and excellence*
- *Discussion on different questions for Scholarship*
- *Going through marking schedules*
- *Using the latest NCEA results to guide the teaching this year*
- *Matching appropriate standards to students*
- *How to set up internal moderation*
- *Formulating exemplars for unit standards*
- *Sharing student data and marking criteria.*

Negative
- *Too generic.*
- *Not all relevant topics were covered.*
- *Too short to allow for exemplars/resources writing or we needed a follow-up session.*
- *Still too much difference in marking work.*

- *Mixed messages, inconsistencies about requirements of standards and assessment.*
- *Not understanding the marking schedule or how to get one of these in place.*

Facilitation and Process

Pre-questionnaire:	frequency of classifications:	311 (+)	304 (–)
	% of total classifications:	16.6 (+)	18.0 (–)
	% for "positivity"	50.6 (+)	49.4 (–)
Post-questionnaire:	frequency of classifications:	98 (+)	57 (–)
	% of total classifications:	12.6 (+)	12.3 (–)
	% for "positivity"	63.2 (+)	36.8 (–)

The positive aspects of facilitation focused on presentation, flexibility of topics, knowledge of the facilitator, the preparation done by the teachers in charge, and interaction and discussion. Negative features focused on lack of structure, presentation style, overload of information, lack of organisation, and not having input into the day.

Positive

- *Outside organisers*
- *Well presented*
- *Facilitator who is open, experienced and knows the subject*
- *Good level of flexibility in the topics discussed*
- *Full participation and effective discussion*
- *The national moderator being the PD facilitator*
- *Hard work by all teachers in charge who prepared the days input*

Negative

- *Not structured enough.*
- *Listening to endless information.*
- *Presentation style.*
- *The facilitator did not turn up.*
- *Not having input into the structure for the idea.*
- *Lack of time to work on relevant or new information.*
- *No one seemed to have organisational 'ownership' of the day's activities to ensure all had worthwhile opportunities.*

Content Control

Pre-questionnaire:	frequency of classifications:	31 (+)	37 (–)
	% of total classifications:	1.7 (+)	2.2 (–)
	% for "positivity"	45.6 (+)	54.4 (–)
Post-questionnaire:	frequency of classifications:	28 (+)	15 (–)
	% of total classifications:	3.6 (+)	3.2 (–)
	% for "positivity"	65.1 (+)	34.9 (–)

The positive aspects of content control focused on choice of the areas covered, consultation by the HOD, professional freedom, and covering what was needed. Negative features focused on the need to deal with "now", not participant negativity about the system, being ignored in respect of own needs, and lack of consultation in various ways.

Positive

- *Focus on practical areas needed.*
- *Being consulted by HOD as to our needs.*
- *I had control of what we looked at.*
- *Given professional freedom.*
- *Teacher choice as to what they worked on.*
- *Choice of in-house or external courses.*
- *Asked us what we wanted to learn about Scholarship.*
- *Choice—enabling departments to choose their programme.*
- *Department time to focus on assessment that specifically affected our teaching.*

Negative

- *Negative focus of discussions. We need to deal with the 'now'.*
- *No consultation.*
- *We needed to be focusing and some teachers were not well focused.*
- *We had been given an aim to work towards by the principals without consultation.*
- *I was asked in an email beforehand what I wanted to cover. But she totally ignored what I asked for her to cover.*
- *Still a lot beyond our control—e.g., exemplars of externals.*
- *Speaker, though interesting, did not focus on specific NCEA requirements.*

School-based

Pre-questionnaire:	frequency of classifications:	16 (+)	13 (–)
	% of total classifications:	0.9 (+)	0.8 (–)
	% for “positivity”:	55.2 (+)	44.8 (–)
Post-questionnaire:	frequency of classifications:	55 (+)	8 (–)
	% of total classifications:	7.1 (+)	1.7 (–)
	% for “positivity”:	87.3 (+)	12.7 (–)

The positive aspects of school-based professional development focused on the benefits of having a departmentally based programme that met teachers’ needs, the sharing of tasks and preparation, convenience and relevance, and being able to discuss links between the different levels of NCEA within the teachers’ own context. Negative features focused on the absence of networking, absence of own staff for the professional development, and having to organise the professional development rather than using an outside group or facilitator.

Positive

- *Whole department focus.*
- *Department was able to choose what to do ... could design it to meet our own needs.*
- *Comparison of success with other departments in our school.*
- *Our departmental colleagues were also at school, so we could work together.*
- *All department members had specific tasks that they were expected to complete.*
- *Lots of time to brainstorm with others in department.*
- *Held in own school, department areas, own resources at hand.*
- *Having everyone in the department together to discuss links between Year 11, 12 and 13.*
- *Directly related to goals of department/school.*

Negative

- *Most departments did not get the chance to network with other schools.*
- *Having some staff off-site from department.*
- *Having to organise it all myself—no access to Team Solutions etc.*

Relevance

Pre-questionnaire:	frequency of classifications:	387 (+)	256 (–)
	% of total classifications:	20.6 (+)	15.2 (–)
	% for "positivity":	60.2 (+)	39.8 (–)
Post-questionnaire:	frequency of classifications:	84 (+)	59 (–)
	% of total classifications:	10.8 (+)	12.7 (–)
	% for "positivity":	58.7 (+)	41.3 (–)

Relevance is very strongly a bi-polar dimension. If a course is on target from the perspective of the participants it is very likely to be positively rated; conversely, if it deals with material that is not of importance to the participants, it is likely to be negatively rated. It is evident from the figures above that teachers focused more strongly on relevance in the pre-questionnaire than the post-questionnaire. In other words, what was a significant concern before the professional development turned out to be less major after the event. The key positive and negative features relating to relevance are well captured in the comments below:

Positive

- *Relevant to my teaching needs.*
- *The topics/areas covered were relevant and important.*
- *Worthwhile relevant handouts.*
- *Relevant and important to years teaching.*
- *Having time to create useful resources with colleagues.*
- *Attempt to tailor to individual needs.*
- *Worked collegially with people involved who were aware of our needs.*
- *Relevant to present school structure.*
- *Relevance—ideas that would be easily used in the classroom.*
- *Time in afternoon for own professional needs.*
- *In house aspect was good as it allowed us to concentrate on our needs.*

Negative

- *Not all relevant topics were covered.*
- *A wide variety of structures. Mass lectures often inappropriate and unimportant for whole staff.*
- *Too short to allow for exemplars/resource writing or we needed a follow-up session.*
- *Irrelevant detail.*
- *Need more help on writing tasks.*
- *Lack of time to work on relevant or new information.*
- *Wide range of needs within groups so not all met.*
- *Too much theory not enough actual practical advice and examples to use in the classroom.*
- *Some parts of the day were relevant to our school but not at all relevant to NCEA.*
- *The day had little relevance to my teaching.*

Curriculum focus

Pre-questionnaire:	frequency of classifications:	301 (+)	188 (–)
	% of total classifications:	16.1 (+)	11.1 (–)
	% for "positivity":	61.6 (+)	38.4 (–)
Post-questionnaire:	frequency of classifications:	121 (+)	57 (–)
	% of total classifications:	15.6 (+)	12.3 (–)
	% for "positivity":	68.0 (+)	32.0 (–)

Curriculum focus as a theme is closely related to "relevance". Often statements about the one could also be used as examples of the other. For example, the following statements from the "relevance" list also have a "content" implication:

- *Relevant to my teaching needs.*
- *The topics/areas covered were relevant and important.*
- *Relevant and important to years teaching.*
- *The day had little relevance to my teaching.*

However, unlike relevance, curriculum focus remained just as important in the post-questionnaire as in the pre-questionnaire. A pleasing feature in the results is that the post-questionnaire provided a higher positivity rating than the pre-questionnaire—in other words, the experience of the NCEA professional development was more positive than participants' previous experiences from professional development generally. As noted earlier, comments with an explicit student or learning focus (which were not common) were also coded under this heading; a few examples are provided below. While there were a number of comments which explicitly mentioned a content area ("not relevant to ICT"; "focused on our needs in Level 3 stats"), the examples below have been chosen mainly to illustrate the more implicit references to curriculum content.

Positive

- *A number of different strategies were developed for teaching and assessing.*
- *To enable us to set teaching and learning goals.*
- *Being able to meet with teachers in my subject area.*
- *Open discussion on where we can aim to be in delivering the curriculum.*
- *Discussion with peers on how best to impart knowledge to students.*
- *Discussing how to motivate students how to reach their potential.*
- *Teaching strategies within the classroom.*
- *Using the latest NCEA results to guide this year's teaching.*

Negative

- *Examples that target specific subject areas.*
- *Only time available to talk about other's subject area issues so time was split.*
- *Not receiving help for the student in [Level] 3 Biology which is now internally assessed.*
- *Not enough exemplars of student work at Level 3 in Technology ICT.*
- *Content not applicable to classroom teaching.*
- *Experts in our subject area from NZQA and MOE absent.*
- *Better if aimed just to my subject.*
- *More facilitation needed in specific subject areas.*
- *No contact with other teachers teaching similar content in this region.*

Understanding NCEA

Pre-questionnaire:	frequency of classifications:	109 (+)	74 (–)
	% of total classifications:	5.8 (+)	4.4 (–)
	% for "positivity":	59.6 (+)	40.4 (–)
Post-questionnaire:	frequency of classifications:	21 (+)	14 (–)
	% of total classifications:	2.7 (+)	3.0 (–)
	% for "positivity":	60.0 (+)	40.0 (–)

In the pre-questionnaire, the theme "understanding NCEA" (at an introductory level) was given a stronger weighting than was apparent from the post-questionnaire, although there was little difference in the positivity rating. Positive aspects of professional development focused on understanding NCEA better, both in a general sense and in respect of particular features, on managing NCEA, and having the opportunity to try things out. Negative features focused on the different levels of understanding of participants, the need for a specialist to explain ideas, the need for an NCEA handbook, and unsatisfactory responses from NZQA officials (at least as perceived by the participants concerned).

Positive

- *Having the whole day to discuss NCEA during term time.*
- *Modelling the assessment—trying it for ourselves.*
- *Discussing what constituted achieved, merit, excellence.*
- *Changes to Achievement Standards.*
- *Conferencing among my peers and area leaders on how we manage NCEA.*
- *Matching appropriate standards to students.*
- *Directly related to NCEA assessment.*

Negative

- *Not all staff are at the same level.*
- *Reading of standards.*
- *Not having a specialist to speak.*
- *Specific assessment areas were not outlined.*
- *Lack of time to work on relevant or new information.*
- *There needs to be an NCEA handbook.*
- *Duplication between sessions or non-specificity at session.*
- *NZQA presenters repeating information.*
- *NZQA unrealistic opinion.*
- *Confusing presentation about the change.*
- *No concrete/precise advice or handouts.*

Resources and exemplars

Pre-questionnaire:	frequency of classifications:	153 (+)	64 (–)
	% of total classifications:	8.2 (+)	3.8 (–)
	% for "positivity":	70.5 (+)	29.5 (–)
Post-questionnaire:	frequency of classifications:	53 (+)	11 (–)
	% of total classifications:	6.8 (+)	2.4 (–)
	% for "positivity":	82.8 (+)	17.2 (–)

It is very clear that for some teachers, the opportunity to have dedicated time for resource development and sharing is a major value of professional development. While this theme

could not be called a major focus for teachers in general (it accounts for around 6% of classifications in the pre-questionnaire and 5% in the post questionnaire), it is a theme that has relatively high positivity ratings—highest in the pre-questionnaire and second highest in the post-questionnaire. The following comments capture the key positive and negative features of this category.

Positive

- *Able to look at a range of exemplars produced by other students.*
- *Time for resource development.*
- *Marking of exemplars together.*
- *Resources produced by colleagues.*
- *Formulating exemplars for US.*
- *Staff at workshop—keen to network and share ideas/ resources.*
- *Each person contributing ideas and resources.*
- *Other schools sharing resources.*
- *Facilitator came prepared with student exemplars from 2005 exams – Level 1.*
- *Online resources clearly explained ... opportunity for practice was available.*
- *Exemplars which explain specifically the written assessment description.*

Negative

- *No exemplars were forthcoming.*
- *Too short to allow for exemplars/resource writing or we needed a follow-up session.*
- *More sharing of resources would be good.*
- *Not enough exemplars of student work at Level 3 in Technology ICT.*
- *Lack of exemplars at all achievement levels.*

Participant attitude

Pre-questionnaire:	frequency of classifications:	194 (+)	356 (–)
	% of total classifications:	10.3 (+)	21.1 (–)
	% for “positivity”:	35.3 (+)	64.7 (–)
Post-questionnaire:	frequency of classifications:	68 (+)	97 (–)
	% of total classifications:	8.8 (+)	20.9 (–)
	% for “positivity”:	41.2 (+)	58.8 (–)

Participant attitude identified the most negative characteristic of professional development both in respect of the pre- and post-questionnaire results. However, the actual experience of the recent NCEA professional development (post-questionnaire) represents a less negative picture than that suggested by the participants’ previous experience (but note earlier warning about such comparisons). As noted earlier, participant negativity, even if the number of such people are few, can have a serious impact on the experiences of other participants who are focused on achieving understanding of the content. The following comments capture the key positive and negative features of this category.

Positive

- *A willingness of all involved to participate.*
- *There were group activities, thus sharing of ideas with other teachers.*
- *We were able to listen to issues others had.*
- *A large enough group from other schools to keep the discussion going.*
- *Knowledge of experienced staff in Senior Science areas.*
- *Small groups to feel more comfortable to express opinion.*

- *Group involvement and enthusiasm.*
- *All participants were comfortable about sharing and speaking.*

Negative
- *One person in group of five not willing to participate.*
- *Presentations from outside sometimes not useful.*
- *Not many teachers attended so not much sharing.*
- *Outside speakers not needed.*
- *Not being open minded.*
- *Not willing to share ideas.*
- *Off track discussion.*
- *Poor communicator.*
- *We just talked about the things that are not clear but nobody had answers.*
- *Debating over small issues.*
- *The negative behaviour of staff from school about NCEA.*
- *Old school thinking by some people.*
- *Did not link directly to NCEA.*
- *Too much theory and not enough practical advice to use in the classroom.*
- *Facilitator did not pass on information she said she would.*

Time and convenience

Pre-questionnaire:	frequency of classifications:	164 (+)	270 (–)
	% of total classifications:	8.7 (+)	16.0 (–)
	% for "positivity":	37.8 (+)	62.2 (–)
Post-questionnaire:	frequency of classifications:	69 (+)	73 (–)
	% of total classifications:	8.9 (+)	15.7 (–)
	% for "positivity":	48.6 (+)	51.4 (–)

Time and convenience was identified as the second the most negative characteristic of professional development in both questionnaires, but again the actual experience of the recent NCEA professional development (post-questionnaire) presented a less negative picture than the pre-questionnaire. Overall, around 12% of classifications were coded into this category—this indicates that issues around the timing and location of professional development are important. The following examples illustrate the positive and negative aspects of the concerns and experiences of participants.

Positive
- *In school time.*
- *Having the whole day during term time to discuss NCEA.*
- *Having time to look at assessments.*
- *Having time to attend to administration of NCEA.*
- *The first time a workshop on unit standards has been offered to schools.*
- *Well timed PD in term—good allocation to do PD—helped refresh teachers.*
- *Having the amount of time we did to sit there and actually get through the work without having to run off to something else.*
- *Time—very rarely have extended time as a department during a day.*

Negative

- *Time of year training conducted.*
- *Lack of detail due to time.*
- *It was delivered at a time when I didn't teach level 1.*
- *Venue for meeting.*
- *Lack of time to organise.*
- *Insufficient time to put learning into practice.*
- *Poor communication—dates and venue were not clear to participants.*
- *We spent one hour rewording the guidelines a waste of our precious time.*
- *Parking requirement did not allow me to relax.*

Summary of the positive and negative features of professional development

The main findings to emerge from this section of the qualitative data analysis can be summarised as follows:

- Overall the results from the post-questionnaire indicate a more positive view of the professional development undertaken for NCEA than was evident in the general experiences of professional development covered by the pre-questionnaire. However, given that the composition of the two samples differed, particularly in respect of the inclusion of heads of departments (greater membership of this group was evident in the post-questionnaire sample), the conclusion that the differences are due, at least in part, to sampling variation cannot be eliminated.
- The categories that emerged as most important—that is, received the highest percentages of classifications—were "relevance", "facilitation and process", "curriculum focus", "participant attitude", and "time and convenience". The first three of these reinforce strongly the findings from the statistical analyses in earlier sections of this report which identified "being offered content that meets teachers' subject needs" and "having facilitators that know the context and needs of participants", as items of major importance to teachers. The least important factors were "content control" and "school-based", although the latter was very positively valued in the post-questionnaire by those who signalled its importance.
- The most positively weighted categories in the pre-questionnaire were "resources and exemplars", "mechanics of assessment", "curriculum focus", "networking", and "relevance". In the post-questionnaire the order was "school-based", "resources and exemplars", "mechanics of assessment", "networking", and "curriculum focus". "Participant attitude" and "time and convenience" were the only categories to be more negatively than positively weighted in both questionnaires; there was clear evidence of dissatisfaction from teachers with participants who have negative or disruptive attitudes to the professional development.
- Most of the categories that appeared to be less important in terms of the number of classifications they received, nevertheless tended to be positively valued. "School-based", "networking", "resources and exemplars", and "mechanics of assessment", all received positive weightings in both questionnaires; "content control", while negatively valued in the pre-questionnaire, came out strongly positive in the post-questionnaire.
- In respect of location of the professional development, it is evident that both school-based professional development and networking are positively valued approaches to professional development. People with the responsibility for designing professional programmes, should ascertain clearly which of these modes is most appropriate to participants as part of the planning and organisation.

Integration of results from the quantitative and qualitative data analyses

In general, the results from the quantitative and qualitative analyses of the two questionnaires provide consistent or complementary findings, although one or two inconsistencies are apparent. The main findings are listed below.

- Both questionnaires identified that teachers were generally confident about their knowledge and skills in assessing NCEA, but are still willing to participate in further professional development.
- Professional development undertaken in 2005 included curriculum workshops, teacher networking, short courses and conferences.
- While clustering with schools for subject based professional development, including sharing and developing resources, was the most preferred mode of professional development, there was also strong support for school-based programmes. This "dual" pattern was evident in both the quantitative and qualitative analyses, and suggests the need for those organising professional development to identify the preferences of participants.
- Both questionnaires identified that the characteristics of effective professional development involve a strong focus on participants' subject needs, the understanding of such needs by the facilitator, and the engagement of teachers in examining good teaching in their own setting. The first and second of these also emerged strongly in the qualitative data analysis with high classifications for categories related to "relevance", "curriculum focus" and "facilitation and process".
- There was some evidence to suggest that teachers value the more technical aspects of their NCEA professional development (having the skills to make NCEA work) ahead of deeper considerations of knowledge and theory about assessment. Many teachers report being focused on technical issues rather than the theoretical aspects of NCEA.
- Factors identified in the qualitative data analysis as contributing positively to professional development included useful resources and exemplars, a focus on the mechanics of assessment, and a curriculum/content focus relevant to teachers. Also identified were networking, school-based professional development, and content control (in the post-questionnaire). Factors contributing negatively in both questionnaires were participant attitude and the timing, location and convenience of the professional development.
- The pre-questionnaire identified that the most useful resources were exemplars, examples of student work, and assessment guides and marking schedules. The pre-questionnaire also identified that those teachers who also undertook a formal role in NCEA besides teaching (e.g., moderator, marker of external examinations), found the role valuable as professional development.
- Both questionnaires identified that the quality of facilitation is a major factor for ensuring successful professional development; this was also confirmed through the qualitative analysis. Characteristics of effective facilitation include a strong focus on the needs of participants, understanding of participants' contexts, keeping people focused, and preparing key programme goals and objectives.
- Cross-tabulations between the demographic data in the post-questionnaire and key features of effective professional development, identified major variations between schools and the assessment experience of teachers in respect of NCEA. Some

differences were also found involving gender, teaching experience, and subjects. Overall these variations point strongly to the need for the designers of professional development programmes to take account of all of these factors—school context, subject, gender, and the experience of participants—when planning and organising professional activities.

- Lastly, the general conclusion from the analyses of the teacher surveys is that most teachers were at least moderately satisfied with their recent NCEA professional development. While the professional development did not meet their ideal notions of effective professional development, as identified through some of the items in the pre-questionnaire, there was still good support for their actual experiences. Where teachers were less satisfied, there was evidence through the qualitative analysis of poor facilitation, non-appearance of the facilitator, insufficient subject relevance, and timing/convenience problems.

CHAPTER 6

Results from the Student Survey and Interviews

Student Perspectives

Student perspectives were not a major focus of the evaluation. However, student perspectives are an important source of information regarding whether or not shared understandings exist within schools about key design features of NCEA. Year 13 students in particular had had three years' experience with NCEA at the time of our evaluation, so that the perceptions of these students can provide valuable information about aspects of NCEA that—from their point of view—were either working well or required further consideration. In addition, student perceptions of their NCEA experience might inform future planning for the professional development of teachers.

It was therefore decided to include a survey of students' views. The survey comprised a questionnaire administered to Year 13 students in participating schools (N = 396) and follow-up interviews with 21 volunteer students who had responded to the questionnaire. Items in the survey focused mainly on themes identified by the researchers as areas where students could usefully inform the results of the research overall. Rating type items were used for these themes. In addition students were given the opportunity to identify what they most liked and disliked about NCEA through two open ended questions. The follow-up interviews allowed the researchers to probe in more detail the findings of the questionnaire.

Further information and results are presented separately under the following headings:

- Statistical analysis of the questionnaire
- Analysis of student's comments from the questionnaire
- Analysis of student interviews

Statistical Analysis of the Questionnaire

The questionnaire comprised eight rating items and two open-ended questions. This section focuses on the rating items.

Participants and method

At the beginning of December 2005, questionnaires were sent to participating schools to distribute to their Year 13 students. The survey was timed so that students would have completed their end-of-year NCEA examinations—there would be no distractions to the students' study. A return paid envelope (addressed to the researchers) was included with each questionnaire. A total of 172 students responded, representing only about 12% of students. Subsequent discussions between the researchers and schools indicated that some schools had not sent out the questionnaires. These schools agreed to participate in a second administration of the questionnaire in February 2006, however this time the students who participated were "beginning" Year 13 students; their most recent personal experiences of NCEA were therefore from Year 12, although they would have just been given up-to-date information about NCEA for 2006. Another difference was that the original group answered the questionnaire in their own time, whereas the second group answered the questionnaire during school time. A further 224 students completed questionnaires.

Because of the differences associated with the samples and questionnaire administration, the researchers decided to analyse the responses separately for each group (as well as overall) and identify whether any important differences occurred. However, it should be stressed that the samples concerned could not be assumed to be representative of Year 13 students nationally. This study should therefore be viewed as exploratory, although it is possible for teachers in schools throughout New Zealand to assess whether the findings make sense in respect of their own school contexts.

The data may also have relevance in the sense that they enable a limited form of triangulation to take place between students' and teachers' responses. The students and teachers were based in the same schools; if the aggregated student data identify an area of NCEA that the students think is a problem for them, and the aggregated teachers' data recognises, or conversely fails to recognise, that there may be a professional development implication in the area or theme concerned, a case for reflective thinking is at least suggested.

The questionnaire and analyses

The questionnaire comprised eight rating items and two open-ended questions. Details are shown in Appendix F. The rating items focused on students' perceptions of the following themes:

1. the value of NCEA for their learning
2. the intrusion of NCEA assessment on teaching time
3. the extent to which NCEA is working well in their school
4. the value placed on NCEA by the students' family/whānau
5. the effectiveness of the NCEA preparation provided by teachers
6. the extent to which NCEA narrows learning to what is tested
7. the quality of information and guidance about how NCEA is marked
8. the quality of schools' advice about NCEA qualifications

All items were rated according to the following scale:

Absolutely not true	=	1
Probably not true	=	2
Not sure	=	3
Probably true	=	4
Absolutely true	=	5

In order to control for response bias, Items 1, 4, 5 and 8 were positively worded and Items 2, 3, 6 and 7 were negatively worded. However, for consistency in analysis, the scales for the negatively worded items were reversed enabling direct comparisons to be made between items. All results presented in this section reflect this reversal.

Two main analyses were conducted[15]:

- frequencies and percentages were calculated for each category on each item
- chi-square analyses were conducted for each item comparing the ratings from the "2005 end-of-year" group with those from the "2006 start-of-year" group.

[15] All analyses were carried out using the Statistical Package for the Social Sciences (SPSS).

Other exploratory analyses were carried out (e.g., a factor analysis of the questionnaire items) but these are not reported here because they do not relate to the key findings from the survey. Results of these analyses may be included in the final report.

The results for the first analysis are shown in Tables 6.1-6.8 (one table per item) and Appendix E. This Appendix gives the complete data for each group and the combined sample, while Tables 6.1-6.8 abbreviate these data for the convenience of readers by showing only the percentages of students who gave "favourable to NCEA", "not sure", and "unfavourable to NCEA" responses. Operationally, these three categories have been defined as:

Favourable to NCEA:	Ratings of an item as "4" or "5" following reversal of the scale for negatively worded items.
Not sure:	Ratings of an item as "3".
Unfavourable to NCEA:	Ratings of an item as "1" or "2" following reversal of the scale for negatively worded items.

The results for the second analysis are shown beneath each table (6.1 to 6.8). However, it should be noted that the chi-square analyses were conducted on the five-category data (not the abbreviated data).

A brief interpretation of the data for each item is given below the relevant table.

The results for each item

Item 1: I think NCEA is good for my learning

Details for Item 1 are presented in Table 6.1.

Table 6.1: Percentage of students responding favourably and unfavourably to Item 1

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	52.9	53.1	53.1
Not sure	13.4	27.2	21.2
Unfavourable to NCEA	33.7	18.7	25.2
Total % responding	100.0	99.1	99.5

(Chi-square analysis: $\chi^2 = 19.77$, df = 5, $p \leq .001$, N = 396)

Interpretation: Favourable ratings exceed 50% (more than the other two categories combined) for all groups. Given the media negativity in 2005 towards NCEA there is some comfort in these results, but there is clearly still some way to go in the view of a sizeable percentage (33.7%) of the 2005 end-of-year group. The chi-square analysis identifies a significant difference between the 2005 and 2006 year groups. Both groups are similar in their level of "favourable" ratings, but quite different in the distribution of ratings between "unsure" and "unfavourable".

Item 2: NCEA means that teachers spend too much time on assessment rather than teaching

Table 6.2: Percentage of students responding favourably and unfavourably to Item 2

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	32.0	27.7	29.5
Not sure	18.6	34.8	27.8
Unfavourable to NCEA	49.4	36.2	41.9
Total % responding	100.0	98.7	99.2

(Chi-square analysis: $\chi^2 = 16.22$, df = 5, $p \leq .005$, N = 396)

Interpretation: It is clear that "unfavourable" ratings outweigh "favourable" ratings for the 2005 group. The results for the 2006 year group reveal a different pattern but are still not a great deal more positive; while there is a lower percentage of unfavourable responses (36.2 percent for 2006 compared to 49.4 percent for 2005), there is also a lower percentage of favourable responses (27.7 compared to 32.0). The data in Table 6.2 indicate the need for further reflection by the Ministry and NZQA—to what extent do the results identify a real problem requiring structural changes to NCEA and/or further professional development for teachers, or a temporary one that will ease with further bedding down of the system? The different pattern between the two groups is reflected in the chi-square analysis, which again identifies a statistically significant result. One possible interpretation for the greater use of "not sure" by the 2006 group is that the new school year was just underway for them—their experiences of NCEA in the previous year were more distant than those for the 2005 end-of-year group. (It should be noted that the 2006 group achieved a higher percentage for "not sure" than the 2005 group on every item of the questionnaire.)

Item 3: NCEA is not working well in my school

Table 6.3: Percentage of students responding favourably and unfavourably to Item 3

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	40.7	38.4	39.5
Not sure	30.8	37.9	34.9
Unfavourable to NCEA	27.9	22.3	24.8
Total % responding	99.4	98.7	99.2

(Chi-square analysis: $\chi^2 = 5.49$, df = 5, $p = .359$, N = 395)

Interpretation: While favourable ratings outweigh unfavourable responses for both groups, the percentages for "unsure" are large (the highest for any item in the questionnaire). These students may well feel that they do not have enough information or experiences to make an informed judgement of how well NCEA is working in their school. The chi-square analysis indicates no significance difference between the two groups.

Item 4: My family/whānau think that NCEA will give me a good qualification.

Table 6.4: Percentage of students responding favourably and unfavourably to Item 4

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	37.8	53.6	46.7
Not sure	19.8	21.0	20.5
Unfavourable to NCEA	41.3	24.6	31.8
Total % responding	98.8	99.1	99.0

(Chi-square analysis: $\chi^2 = 19.51$, df = 5, $p \leq .002$, N = 394)

Interpretation: The results for the two groups are substantially different, with the 2006 group identifying a clearly more favourable "valuing" of NCEA by their family/whānau. The chi-square analysis reflects this difference (a statistically significant result). There are no obvious explanations for this result—the two month gap between the administrations of the questionnaire coincided with the Christmas and January holiday periods, so there would not have been any concerted effort on the part of schools to give more information to the families/whānau of their students.

Item 5: My teachers have prepared me well for this year's NCEA assessment.

Table 6.5: Percentage of students responding favourably and unfavourably to Item 5

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	64.5	57.6	60.6
Not sure	16.3	27.7	22.7
Unfavourable to NCEA	18.6	13.4	15.7
Total % responding	99.4	98.7	90.0

(Chi-square analysis: $\chi^2 = 10.40$, df = 5, $p = .065$, N = 395)

Interpretation: The results for Item 5 indicate that the majority of students in both groups were happy with the level of preparation provided by their teachers—clearly a satisfactory finding. Favourable ratings outweigh unfavourable ratings by over three to one for the 2005 group and four to one for the 2006 group. No other item has as strong a positive ratio between these two categories, although Item 8 (see later) has comparable percentages for favourable ratings. The chi-square value for the comparison of the two groups does not quite reach statistical significance at the .05 level. The main difference between the two groups was the 11 percent higher rating for "not sure" by the 2006 group.

Item 6: NCEA makes me focus too much on what will be tested, rather than on learning the subject.

Table 6.6: Percentage of students responding favourably and unfavourably to Item 6

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	15.1	16.5	15.9
Not sure	8.1	13.4	11.1
Unfavourable to NCEA	76.7	69.2	72.5
Total % responding	100.0	99.1	99.5

(Chi-square analysis: $\chi^2 = 11.04$ df = 5, p = .051, N = 396)

Interpretation: In marked contrast to Item 5, unfavourable ratings strongly outweigh favourable ratings for both groups. The ratio of the difference is five to one for the 2005 group and over four to one for the 2006 group. There is a strong message being sent here by students—"learning for assessment" rather than "assessment for learning" appears to be the experience of many of these students. These results reinforce the findings for Item 2 (that teachers spend too much time on assessment rather than teaching) and perhaps shed further light on the positive ratings for Item 5—whilst teachers are doing a good job in preparing students for NCEA assessment, students would rather spend more time learning and investigating their subjects and less time on preparing for their assessments. The chi-square value for the comparison of the two groups approximates the .05 level of statistical significance, but the main difference appears to be minor: the 2005 group provided a higher percentage for "unfavourable" ratings (by about 7 percent) whereas the 2006 group provided a higher percentage for "not sure" (by about 5 percent).

Item 7: I am not getting enough information and guidance about how my NCEA assessments are marked

Table 6.7: Percentage of students responding favourably and unfavourably to Item 7

Rating	**2005 End-of-year Group (N = 172)**	**2006 Start-of-year Group (N = 224)**	**Combined Sample (N = 396)**
	Percentage	**Percentage**	**Percentage**
Favourable to NCEA	47.7	33.9	39.9
Not sure	9.9	21.9	16.7
Unfavourable to NCEA	41.9	42.9	42.4
Total % responding	99.4	98.7	99.0

(Chi-square analysis: $\chi^2 = 26.85$, df = 5, p ≤ .000, N = 395)

Interpretation: The results for Item 7, on balance, lean slightly more in the direction of "favourable to NCEA" for the 2005 group and "unfavourable to NCEA" for the 2006 group. The latter group again provided a higher percentage for the "unsure" category (21.9 percent compared to 9.9 percent for the 2005 group). Overall the results suggest that not enough students feel they are getting adequate information on how NCEA results are marked. The chi-square analysis identifies a significant difference between the pattern for the two groups. Given that the percentages for "unfavourable" are similar between the two, the difference again appears to lie in the greater propensity for the 2006 group to provide "not sure" ratings, this time at the expense of "favourable" ratings.

Item 8: My school has given me good advice on the NCEA qualifications that I need for my future

Table 6.8: Percentage of students responding favourably and unfavourably to Item 8

Rating	2005 End-of-year Group (N = 172)	2006 Start-of-year Group (N = 224)	Combined Sample (N = 396)
	Percentage	Percentage	Percentage
Favourable to NCEA	62.8	59.8	61.1
Not sure	14.0	17.9	16.2
Unfavourable to NCEA	23.3	21.4	22.2
Total % responding	100.0	99.1	99.5

(Chi-square analysis: $\chi^2 = 9.15$, df = 5, p = .103, N = 396)

Interpretation: The results for Item 8 indicate that the majority of students in both groups were happy with the advice given by their schools about future NCEA qualifications available to them. Favourable ratings outweigh unfavourable ratings by nearly three to one for both groups. The chi-square value for the comparison of the two groups is not quite statistically significant at the .05 level; similar rating patterns occurred for both groups.

Summary of the statistical analysis of the student questionnaire

Students were most positive about the NCEA assessment preparation provided to them by their teachers (Item 5) and the advice given to them by schools about future NCEA qualifications (Item 8). They were also positive about the value of NCEA for their learning (Item 1), and marginally positive about NCEA working well in their school (Item 3). However, the last of these items also produced relatively high percentages for ratings of "not sure".

Negativity towards NCEA was strongest in relation to the time spent by students on assessment in comparison to learning the subject (Item 6). This was the strongest result, favourable or unfavourable, for any item in the questionnaire. The result was reinforced by students' rating of Item 2, that teachers spend too much time on assessment rather than teaching.

The remaining questions (Items 4 and 7) produced clearly different patterns for the 2005 and the 2006 year groups. On balance, the 2005 group were negative about the value placed on NCEA by their family/whānau (Item 4), whereas the 2006 group were clearly more positive. In respect of information and guidance provided about how NCEA was marked (Item 7), the 2005 group were marginally positive overall in their ratings, whereas the 2006 were marginally negative. However, neither of these items could be said to have provided comforting results about NCEA from the perspective of the students in this study.

Student Responses to the Open-ended Questions

Method and Analysis

Students completing the survey anonymously were also provided opportunity to list up to three things "you like *most* about NCEA" and three things "you like *least* about NCEA." Code categories for the analysis of the student responses to these open-ended questions proceeded as follows:

1. Written student responses were entered verbatim into Word files organized individually for each student, each of whom was assigned a number from 1 to 396. For each student file, individual entries were typed according to the first, second and third choice for both the "most" and "least" lists. If more than three things were noted for one or both questions, these were also entered.

2. A sample of approximately 100 of the 396 files was randomly selected and read by two researchers towards identifying a set of possible categories of responses. Rather than using a grounded theory approach, this phase was influenced by coding themes that had emerged from a larger database of nearly 6,000 independent student responses (Meyer et al., 2006).

3. A different sub-sample of 50 student responses was then separately and independently coded into the initial categories by two of the researchers who then compared their coding decisions to check for an acceptable level of inter-rater agreement and discussed discrepancies. Disagreements at this phase were higher than 10% of responses, so a revised set of coding categories was developed to better accommodate ambiguous codings.

4. The revised coding categories were then used by the two researchers to independently code a third sub-sample of 100 student responses using the new codes. Code assignments by the two coders were then compared and found to be higher than 90% for all but three codes. The coders discussed all disagreements and reached consensus for any discrepancies, refining decision rules for coding the three codes where agreement had been between 80-90%. The remaining student responses were then coded by one of the two researchers using the coding categories and definitions listed in Table 6.9.

Table 6.9: Coding categories for things students like most/least about NCEA

Code Category	Definition and Examples
Choices, Options, Flexibility	Any reference to student choices and system flexibility, including references to the credit system in general and number of credits available
Marking, Grading, Feedback	Anything regarding grades, marks, or feedback on school performance including references to AME, marking consistencies or inconsistencies, wanting more feedback, different grades and more information on marks
Internal and External Assessment	References to internal and/or external assessments, including a mix, impact on workload, assessment pressures, and comments about unit standards
Second Chances, Re-Sits, Resubmissions of Marked Work	Comments about re-sitting examinations, redoing assignments, resubmitting revised work for new marks and so on
Consistency, Fairness, Variability	Comments about consistency and/or inconsistency across subjects and/or across schools, including references to subject and school variability and/or fairness across subjects and/or schools
Stakeholder and Public Understandings	References to whether or not NCEA or aspects of NCEA were understood by students, teachers, parents, employers, universities, the public and so on
Motivation and Impact on Learning Behaviours and Achievement	Comments related to the impact of aspects of NCEA on student learning and/or student learning behaviour and achievement, including references to NCEA being easy or hard, doing only what's needed to pass vs. learning, working beyond 80 credits and so on
Qualification Design Issues	Comments about the nature and structure of the qualification including references to standards, the relationship between teaching and assessment (teaching to the test, studying what's tested etc), clarity of criteria regarding what's expected, and clarity of achievement standards
General Evaluative	General comment not fitting into a specific category such as *It's great* or *It's not as good as the old system*
Other	Comments not fitting into one of the above either because it's irrelevant or not specific to NCEA such as *The exam room sucked* or *Wooop!*

It is important to note that the coding categories were common to both lists, that is, a student comment for either the "like most" or "like least" lists could both be coded in any of the above categories.

The next section summarises patterns in the students' responses and provides sample comments to highlight particular issues occurring frequently throughout the data.

Results

Student responses varied greatly across the different categories, with the majority of comments made fitting into the "Marking, Grading, Feedback" and the "Internal and External Assessment" categories. The majority of the comments regarding marking, grading and feedback were on the list of things that students did not like, whereas the majority of comments regarding internal and external assessment were included on the list of things students like about NCEA. Students were positive about "Choices, Options and Flexibility", having opportunities for "Second Chances" at assessment of their work, and linkages across teaching, learning and assessment under NCEA (coded as "Qualifications Design Issues"). They were generally negative about public and key stakeholder understandings about the system and features that they perceived to be unfair and inconsistent across schools and subjects. The impact of certain aspects of NCEA on motivation to learn and achieve was mixed, with 123 of the comments positive about this aspect of NCEA and 103 negative.

Interestingly, less than 10% of students overall did not enter any comments in this section of the survey and of those who did make comments there were very few that may be termed frivolous. Students appeared to be taking seriously the opportunity to provide input on these issues.

Tables 6.10 and 6.11 below detail the data and percentage distributions according to total positive or negative comments and total surveys received. It is noted that 723 positive comments were coded compared to 771 negative comments.

Table 6.10: What I like most about NCEA

	2005		2006		Total		
code	No. of comments	% of total positive comments	No. of comments	% of total positive comments	No. of comments	% of total positive comments	% of total surveys*
1	48	13.8%	49	13%	97	13.4%	21%
2	34	9.7%	27	7%	62	8.5%	14.8%
3	135	38.0%	108	28%	243	33.6%	50%
4	21	6.0%	31	8%	52	7.2%	13%
5	0	0%	0	0%	0	0%	0%
6	4	1.1%	10	2.7%	15	2%	3.8%
7	59	17.0%	64	17%	123	17%	25%
8	24	6.9%	29	7%	53	7.3%	12.3%
9	9	2.5%	13	3%	22	3%	5%
10	11	3.1%	45	11%	56	7.7%	11%
total comments	347		376		723		
total surveys	172		224		396		

* Percent of total surveys which mentioned this code

Table 6.11: What I like least about NCEA

	2005		2006		Total		
code	No. of comments	% of total positive comments	No. of comments	% of total positive comments	No. of comments	% of total positive comments	% of total surveys*
1	11	2.7%	12	2.8%	23	3%	5.3%
2	150	38.0%	157	36.0%	257	33.3%	46.0%
3	51	12.9%	59	13.8%	110	14.3%	25.7%
4	2	0.5%	4	0.9%	6	0.8&	1.5%
5	36	9.1%	31	7.2%	67	8.7%	15.6%
6	29	7.3%	28	6.0%	57	7.4%	13.4%
7	45	11.4%	58	13.5%	103	13.4%	22.0%
8	31	7.8%	6	1.4%	37	4.8%	9.8%
9	21	5.3%	38	8.8%	59	7.6%	12.6%
10	18	4.5%	34	7.9%	52	6.7%	11.0%
total comments	394		427		771		
total surveys	172		224		396		

* Percent of total surveys which mentioned this code

The next section provides more information about patterns in the student responses, organized by the different coding categories. Sample comments are included in this section, and these are annotated as either "M" for most or "L" for least to clarify on which list the comment was included.

Choices, Options, Flexibility

Where comments were made in this category, they were generally positive and related to the fact that students could choose which credits to accumulate and on which standards they would be assessed. Although student choice has been a major design feature of NCEA, it is interesting that relatively few comments overall (8%) were made regarding this aspect. Selected comments are:

- *There are so many credits available (M)*
- *It is versatile (M)*
- *If you miss out on a few credits, you fail the whole year and have to redo it (L)*
- *Some of the amount of credits you get for an assessment are not right I do not think (L)*

Marking, Grading, Feedback

As in the research on the impact of NCEA on student motivation, there were many comments from students about aspects of marking, grading and feedback on their work, and these comments were primarily listed as things the students did not like (33% of negative comments in this code compared with 8.5% of positive comments). Typical comments include:

- *Lack of specific and comparable marks (L)*
- *Harder to get a high grade especially if you get all merit and excellence questions right and one achievement question wrong you fail (L)*
- *No percentages, so do not know where we are at (L)*
- *No scaling (M)*
- *Achieved, Merit, Excellence grading (M)*

Internal vs. External Assessment

This code along with the previous one accounted for the majority of student comments. However, student comments coded in this category were recorded primarily as things students like about NCEA, particularly with reference to the mix of external and internal assessment and even more so with regarding to opportunities for internal assessment instead of external examinations at the end of the year. Students saw internal assessment as supportive of spreading their work across the year and giving them ongoing feedback on their learning. Typically, positive comments about internal assessment were first on the student lists of what they like, and a sampling of positive comments is provided below:

- *Not as much pressure at the end of the year (M)*
- *The fact that assessments are throughout the year, not all at once (M)*
- *Know how you are going throughout the year (M)*
- *Internal/external combination (M)*

Where student comments in this category were listed under things they like least, these included comments about being tested all year long on internals or related to external assessment generally, such as:

- *You get annihilated with tests all year (L)*
- *Assessment piling up through year all at one time (L)*
- *Externals, everything should be internals (L)*
- *Externals (a common entry for L)*

Comments about unit standards—as internally assessed—were also coded in this category, but there were only a very few statements included by students that explicitly mentioned these.

Second Chances, Re-Sits, Resubmissions

Generally, students are very positive about opportunities to re-sit assessments and have second chances to pass credits that might have been missed the previous year. Comments included:

- *Ability to resubmit or withdraw from certain standards (M)*
- *You can resit some stuff (M)*
- *You have second chances if you fail (M)*
- *They have pre test before the big one (M)*

There were few comments in this category recorded on the "least liked" list. However, when comments were made they referred to issues of fairness or consistency and were coded in the next category accordingly.

Consistency, Fairness, Variability

Students commented about aspects that they felt were unfair or about their perceptions of lack of consistency, as well as about equal opportunities across subjects and across schools. Thus, these comments were typically recorded as things they liked least about NCEA. Examples follow:

- *Lack of support of extra subjects not in curriculum by school (L)*
- *Some subjects have more credits than others (L)*
- *Inconsistencies across subjects (e.g., more externals for sciences) (L)*
- *I hate that some people can pass by doing "cab" subjects like health and cooking while others get crap call credits doing a hardest maths assignment (L)*
- *Each school has different internal assessments making marking bias (L)*

Stakeholder and Public Understandings

Some students perceived misunderstandings about NCEA or reported that their parents found it confusing, though there were also a very few comments to the contrary:

- *It is easy to understand (M)*
- *Do not understand results (L)*
- *It is confusing (L)*
- *Do universities etc even understand it? (L)*
- *My family does not understand how it works. Not explained enough (L)*

Several students commented on their "least liked" list that the qualification was "not recognised" generally or not recognised overseas—an inaccuracy, as NCEA is recognized overseas—suggesting that some basic misunderstandings were still an issue.

Motivation and Impact on Learning Behaviours and Achievement

Many students repeated the perception that NCEA was easy, and for some students this was a plus (recorded as something they most like) and for others this was a minus (recorded as something they least like). Some commented positively that NCEA required them to work hard all year, while others found this aspect negative. Student comments also focused on the negative impact of attention being on credits rather than on learning, and on whether NCEA required working hard. Comments included:

- *Easy to get (M)*
- *Easy to pass (M)*
- *Makes you work hard all year (M)*
- *No need to get higher grades (L)*
- *Have to work hard all year (L)*
- *Emphasis on only achieving to get the credits (L)*
- *Does not encourage competitiveness (People do enough to pass) (L)*

Qualification Design Issues

Comments for this aspect tended to highlight perceptions that teaching and learning were guided by assessment. There were also comments about the clarity of standards and criteria for achieving those standards:

- *Every standard is defined so you know exactly what to learn (M)*
- *Knowing what will be in assessments (M)*
- *It only teaches me to the syllabus of the assessment (L)*
- *Study for a topic, test it, forget about it and move to the next one (L)*
- *That the teachers do not teach you the assessment, e.g., they teach the wrong thing then in an exam you have studied the wrong thing (L)*
- *Frequent changes in the criteria (L)*

Note that some of these comments express a student perspective that teachers *should* teach to the test or teach what is going to be assessed, thus illustrating different perspectives on the relationship between teaching and learning on the one hand, and assessment of teaching and learning activities on the other.

General Evaluative

Interestingly, there were few general comments expressing an overall evaluation of the NCEA. Instead, students were far more likely to make comments that fit clearly in a particular coding category—that is, they could describe what it is they like or do not like, rather than simply making a sweeping statement either approving or disapproving of the qualification. Comments of this nature that were made included:

- *It is not creditable (L)*
- *It is putting people into categories depending on their achievements (L)*
- *It is too politically correct. They are very fussy about how they say things, e.g., the whole "not achieved" issue (L)*
- *Everyone has a chance (M)*

Other

A few student entries on the two lists were essentially irrelevant to the question, addressed issues that had nothing to do with NCEA, or could be regarded as frivolous. There were very few of these, including the following:

- *Sending back my results (M)*
- *Did not pass design folio (L)*
- *The fact that I pass (M)*
- *Failing (L)*
- *Wooop (L)*

Summary of Findings for the Comments/Questions

Aspects of assessment

- The majority of students were favourable about the internal assessment of standards in NCEA, and reported a positive impact on both teaching and learning as well as their own ability to plan their workload throughout the school year. This would not be the case with external, end of the year examinations only.

- Students who commented on the issue of grading and marking were most likely to want more detail regarding their school performance and more feedback on how well they did. They wanted to know, for example, whether a Merit was barely above Achieved or close to Excellence.

- Students commented about the lack of logic and unfairness of failing an achievement standard despite passing Merit and Excellence questions for that standard.

- A small number of students expressed a preference that teachers focus their attention on those aspects of the subject that would be assessed, rather than expressing concern that this was "teaching to the test" or would limit their learning.

Understandings about NCEA

- Some year 13 students expressed concern that their parents, family members and potential employers still do not understand NCEA.

Year 13 Student Interviews

Participants and method

As described in the proposal, a sub-sample of the 396 students completing the NCEA Student Experience Survey at the end of Year 13 was subsequently interviewed individually by telephone in March-April 2006. These students had left school and would have received their NCEA results for the previous year. The interviewer was able to contact 21 students during this timeframe; an attempt was made to interview students from across schools by selecting different regional codes; school identity was not included on the consent forms providing contact information. Students were asked the following eight questions:

1. Can you give two examples of the most difficult ideas that you understood at the end of last year that you didn't understand the previous year? Did NCEA help you to understand these ideas? Do you think that NCEA has been good for your learning?

2. Do you think your teachers spend enough time or too much time on assessments rather than on teaching?

3. Do you think that the NCEA system was fair for you?

4. Do you think that your teachers prepared you well for the internal and external assessments?

5. Do you think that your family/whānau understand NCEA? If no, what parts don't they understand? What do you think would help them to understand better?

6. How easy has it been for you to use your NCEA results since leaving school?

7. Do you think your school gave you good advice on NCEA?

8. Are there changes you would like to see included in the NCEA system?

Student responses were recorded in detailed notes by the interviewer, and responses were then coded by a senior researcher on the team who reported numbers of student responses in major response categories as well as noting major themes or points made by the students. The summary of the key findings listed below was subsequently developed and agreed by consensus across two senior researchers experienced in working with qualitative data.

Results of student interviews

Attitudes towards and understandings about NCEA

Students were overwhelmingly positive in their perceptions that NCEA was fair for them, that teachers prepared them well for both internal and external assessments, that their schools had made good advice available to them on NCEA, and that it has been easy to use their NCEA results since leaving school. On the latter point, approximately half the students commented that they had attained University Entrance without complication, and others made comments to the effect that employers and polytechnic programmes had grown in understanding of how NCEA works. On the other hand, students reported that on the whole their parents did not yet understand NCEA. They commented on efforts schools had made such as information nights for parents and printed information, but their families were reported to have not yet mastered what the record of learning reports meant. Several students commented that their family attitudes towards NCEA were influenced by negative publicity that they felt was unfair at the present time and interfering with developing understandings: One student commented "Get rid of the prejudice against NCEA."

Impact on learning and attaining goals

In response to the question regarding whether NCEA had aided their understanding of "difficult ideas", the majority of comments made related not to concepts but to technical or factual aspects of a subject such as understanding a particular fact about chemistry. One student referred to developing a better understanding of *tense* in a foreign language and another mentioned learning that religion had played a key role in shaping particular national identities. In general, our analysis of the responses indicates that the students may not have understood the question, which itself is an interesting finding. Students were evenly divided on the issue of whether NCEA was good for their learning. Typical comments referred to the benefits of being focused on what to learn and statements valuing internal assessment as

providing ongoing information about one's learning towards attaining a particular goal such as University Entrance. On the other hand, some students felt that teachers taught only what was in the assessment rather than teaching towards general learning; one student commented "information 'drummed' in." Some students commented that teachers were not teaching towards "excellence" for students wanting to attain Merit or Excellence. Concerns were also expressed about inconsistencies between opportunities afforded by different schools.

Aspects of assessment: grading and marking

Students reported that teachers prepared them well for both internal and external assessments. Comments referred to the availability of good exemplars and knowing what to expect; one student commented "…so it is your own fault if you aren't ready." Again, there was comment that there was not enough teaching and learning time dedicated to achieving merit or excellence. Consistent with feedback reported in various student data sources in Meyer, McClure, Walkey, McKenzie and Weir (2006), comments made by students regarding assessment grade bands and marking practices focused on design modifications that were felt to be needed to provide better information to students and to fix anomalies or perceived problems. One such anomaly was the potential to be graded Not Achieved on a standard for which students had correctly answered Merit and/or Excellence questions; they felt this was illogical and unfair. Eight out of the 21 students commented on the need for a "big overhaul of the marking system" and nine commented that their families did not understand the marking criteria and absence of percentages for grades. Some specifically noted that the four grade bands were too broad, several students stated a preference for percentages in their results, and one student expressed a preference for being able to compare oneself with peers. Students also commented on possible inconsistencies between externals and internals, unit standards in comparison to achievement standards, criteria for allowing re-sits, and variability across different subjects.

Discussion

There were clear patterns in the responses of these graduates of Year 13 and NCEA Level 3 that they shared with us in these individual interviews. Overall, they were positive in principle about NCEA while expressing concerns over certain design features, aspects of the assessments and grading procedures, and inconsistencies in practice and opportunities across some schools and some subjects. These were issues that they believed could be addressed—not aspects that were associated with a negative evaluation of the qualification itself. Interestingly, they saw lingering misunderstandings and negative attitudes as attributable primarily to media reports. They also saw that understanding and acceptance was growing. Of particular relevance to this project regarding the approaches schools took to teacher professional development for NCEA is their affirmation that schools and teachers were preparing them well and making headway in increasing understandings outside schools with the broader community. They were clear where changes were needed and offered helpful suggestions—and they were generally positive about the capacity of the system to address remaining issues and concerns.

Integration of Findings from the Student Survey

In general, the results from the three components of the student data provided consistent or complementary findings, although one or two inconsistencies are apparent. The main findings are listed below.

Features identified as favourable included:

- the preparation for NCEA assessments provided by teachers (indicated by Item 5 and the interviews)
- the advice given about NCEA by schools (Item 8 and the interviews)
- the benefits of having marking criteria and exemplars to guide student learning (interviews)
- the value of internal assessment for ongoing feedback and allowing students to plan their workload over the year (open-ended questions and the interviews)
- the fairness of NCEA and its relevance since leaving school, including the understanding of the qualification from employers and its links with polytechnic programmes (interviews).

Features identified as raising concerns included:

- the narrowing of teaching and learning in order to focus on what will be assessed (very strongly indicated by Items 6 and 2, as well as by the interviews; however, the small number of students who commented on this in the open-ended questions were positive about “teaching to the test”)
- various aspects of the grading and marking of NCEA such as the need for more feedback on performance, the need for a more refined grade scale to locate level of performance (e.g., percentages), and the possibility of failing an achievement standard while being able to pass questions at the merit and excellence levels (open-ended questions and the interviews; students were divided on Item 7)
- apparent inconsistencies between standards in relation to internal and external assessment, Unit Standards and Achievement Standards, and the grades from different schools; also inconsistencies between schools in their policy on resits (interviews)
- lack of understanding of NCEA from family/whānau and the negative view presented of it from the media (open-ended questions and the interviews; students were divided in their rating of Item 4).

CHAPTER 7

NCEA Professional Development: Key Findings

Our key findings are organised by data source into three areas: senior management and teacher interviews, teacher questionnaires, and student survey.

Findings from the Senior Management and Teacher Interviews

Timing of the Professional Development

Schools were notified of the professional development resource mid-2005 and were given permission to close their schools for two half-days for the professional development.

- Few schools utilised the additional professional development resource before the end of the 2005 school year (5 of 28 schools reporting), and one of these schools did so in June 2005 prior to receiving the needs analysis toolkit. The majority of schools did not schedule professional development until well into the 2006 year, 11 in March, six between April and June, and one not yet scheduled as of late June.
- School reasons for not scheduling professional development until 2006 was that 2005 professional development was already set by the time additional resourcing had been made available and they felt notice was too late in the year to adjust a planned programme of professional development. Some schools noted their preference to defer the professional development until the start of 2006 so that the needs analysis and professional development could be done based on 2006 personnel including any new staff.
- All schools completing their professional development at the time of our report elected to close school for one full day for the professional development.

Use of the needs analysis toolkit

Notice of the additional resource and opportunity for professional development included a needs analysis toolkit that was made available but not required as the basis for the design and delivery of professional development at each school.

- Schools varied greatly in their use of the needs analysis toolkit, with key personnel at some schools indicating they were unaware of the toolkit or didn't look at it (6 schools), looked at it but decided not to use it (9 schools), used the toolkit as is (10 schools) or adapted the toolkit for use (3 schools)
- Low decile schools were more likely than middle or high decile schools to have decided not to use the toolkit. Two of these low decile schools said the toolkit was not appropriate for their schools, and only the high decile schools adapted the toolkit to suit their schools. Middle decile schools were most likely to use the toolkit as is.
- Girls' schools used a needs analysis widely within their schools; boys' schools did not.
- School size was not related to use of the needs analysis toolkit, nor was use related to whether or not a school clustered with other schools for professional development
- A minority (3 of 11) of the case study schools said they would use the toolkit in planning for future professional development or were still using it.

Clustering for professional development

Whether or not schools chose to cluster with other schools for professional development varied as a function of department size, location of the school, history of clustering, and other factors such as timing of the professional development in relationship to that of other potential cluster schools. Over 50% of schools chose to cluster at least partially, with approximately 40% electing to carry out all professional development without clustering.

- Four of the schools in the study had difficulty in organising the use of the professional development day. Each of these schools had changes occurring in their senior management teams. One of the case study schools had not used the resource by the end of June 2006.
- Large departments within a school typically did not cluster across schools, whereas small departments in large schools, and small schools in general, were most likely to cluster.
- Schools with a whole school approach to professional development and those with no history of clustering were least likely to cluster; wharekura did not cluster as potential cluster partners were too dispersed geographically. Schools that did cluster with schools of similar characteristics e.g., all small rural schools or all decile 1, valued the contact that they had with colleagues from other schools.
- Clustering occurred across decile ranges, school sizes and urban/rural venues. Clusters were regionally-based and varied in size from 3 to more than 10 schools.
- Clustering was most likely to occur where some clustering was already in place, and existing clustering was related to active involvement in clustering activities by staff from the regional school support advisory services.
- Clustering decisions tended to be driven by the school principal and were sometimes influenced by regional advisors.

Focus of the professional development day

Each school was able to decide on the focus for the NCEA professional development day for its teachers. A number of different approaches were used to make the decision on how to use the day. There were similarities across schools with the content of the day, with most schools focussing on subject based NCEA programmes, moderation and assessment for at least part of the day.

- The decision making process on how to best utilise the resources provided by the Ministry of Education was unique at each of the case study schools. The comparison schools could be matched to the different paths observed at the case study schools. It was usually the principal of a school who made the decision to cluster or not.
- The majority of teachers in the case study schools spent the time in department or subject clusters looking at the changes to achievement standards, NCEA assessment tasks and moderation.
- Three case study schools working independently of other schools and one which clustered spent part of the day as a whole group. Six schools had teachers working in their subject areas all day, whether clustered with teachers or within their own school.
- Some schools and departments chose to not solely focus on the technical aspects of implementing achievement standards in their NCEA professional development. The

use of tools such as asTTle, KAMAR, Smart Boards were included at some schools. One school examined the achievement of boys. Some departments examined year 9 and 10 programmes and achievement, some worked on filing and administrative tasks.

- None of the schools in the study had focussed on Scholarship. In one cluster group, examining Scholarship was an option for the English teachers.
- Scholarship was the area identified by 70% of the case study schools as an area that needs further professional development.
- Further learning needs identified were unique to individual schools or areas.

Facilitators

The majority of schools had heads of department as the facilitators of the NCEA professional development. A few used advisors or other external expertise as facilitators. In one cluster the advisors sat in alongside the teachers.

Teachers' experiences of the day

One out of ten case study schools stood out with negative comments about the professional development day. This school was part of a full cluster group where the day appeared to be poorly organised.

Further NCEA professional development planned

Four schools planned or had already carried out a second NCEA professional development day.

Comparing to previous NCEA professional development

The school leaders felt that this round of NCEA professional development was more reflective than previous NCEA professional development days. Being able to focus on local needs was appreciated by all schools that did this.

Wharekura

Wharekura followed a different decision-making pathway when planning for their NCEA PD day.

Wharekura had unique differences when compared to the mainstream schools in this study. This includes:

- involving their community/whānau in the planning
- focus on the different qualifications and learning pathways for their students
- lack of access to support from advisory services
- difficulty in clustering due to geographical dispersal.

Teachers new to New Zealand and beginning teachers

The teachers new to New Zealand and beginning teachers have reported different learning needs to their more experienced colleagues. Beginning teachers reported having support structures in place, though these did not always include specific NCEA. Teachers new to New Zealand appeared to need increased support to understand and implement NCEA in their classes. New and beginning teachers who are working in sole departments found the clustering particularly useful.

Findings from the Teacher Questionnaires

In general, the results from the quantitative and qualitative analyses of the two questionnaires provide consistent or complementary findings, although one or two inconsistencies are apparent. The main findings are listed below.

- Both questionnaires identified that teachers were generally confident about their knowledge and skills in assessing NCEA, and were still keen to participate in further professional development.
- Professional development undertaken in 2005 included curriculum workshops, teacher networking, short courses and conferences.
- While clustering with schools for subject based professional development, including sharing and developing resources, was the most preferred mode of professional development, there was also strong support for school-based programmes. This "dual" pattern was evident in both the quantitative and qualitative analyses, and suggests the need for those organising professional development to identify the preferences of participants.
- Both questionnaires identified that the characteristics of effective professional development involve a strong focus on participants' subject needs, the understanding of such needs by the facilitator, and the engagement of teachers in examining good teaching in their own setting. The first and second of these also emerged strongly in the qualitative data analysis with high classifications for categories related to "relevance", "curriculum focus" and "facilitation and process".
- There was some evidence to suggest that teachers value the more technical aspects of their NCEA professional development (having the skills to make NCEA work) ahead of deeper considerations of knowledge and theory about assessment. Many teachers report being focused on technical issues rather than the theoretical aspects of NCEA.
- Factors identified in the qualitative data analysis as contributing positively to professional development included useful resources and exemplars, a focus on the mechanics of assessment, and a curriculum/content focus relevant to teachers. Also identified were networking, school-based professional development, and content control (in the post-questionnaire). Factors contributing negatively in both questionnaires were participant attitude and the timing, location and convenience of the professional development.
- The pre-questionnaire identified that the most useful resources were exemplars, examples of student work, and assessment guides and marking schedules. The pre-questionnaire also identified that those teachers who also undertook a formal role in NCEA besides teaching (e.g., moderator, marker of external examinations), found the role valuable as professional development.
- Both questionnaires identified that the quality of facilitation is a major factor for ensuring successful professional development; this was also confirmed through the qualitative analysis. Characteristics of effective facilitation include a strong focus on the needs of participants, understanding of participants' contexts, keeping people focused, and preparing key programme goals and objectives.
- Cross-tabulations between the demographic data in the post-questionnaire and key features of effective professional development, identified major variations between schools and the assessment experience of teachers in respect of NCEA. Some

differences were also found involving gender, teaching experience, and subjects. Overall these variations point strongly to the need for the designers of professional development programmes to take account of all of these factors—school context, subject, gender, and the experience of participants—when planning and organising professional activities.

- Lastly, the general conclusion from the analyses of the teacher surveys is that most teachers were at least moderately satisfied with their recent NCEA professional development. While the professional development did not meet their ideal notions of effective professional development, as identified through some of the items in the pre-questionnaire, there was still good support for their actual experiences. Where teachers were less satisfied, there was evidence through the qualitative analysis of poor facilitation, non-appearance of the facilitator, insufficient subject relevance, and timing/convenience problems.

Findings from the Student Survey

In general, the results from the three components of the student data provided consistent or complementary findings, although one or two inconsistencies are apparent. The main findings are listed below.

Features identified as favourable included:

- the preparation for NCEA assessments provided by teachers (indicated by Item 5 and the interviews)
- the advice given about NCEA by schools (Item 8 and the interviews)
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- lack of understanding of NCEA from family/whānau and the negative view presented of it from the media (open-ended questions and the interviews; students were divided in their rating of Item 4).

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Appendices

APPENDIX A
Needs Analysis Toolkit

APPENDIX B
Research Questions and Data Sources

APPENDIX C
Teacher Pre-Questionnaire

APPENDIX D
Teacher Post-Questionnaire

APPENDIX E
Student Responses

APPENDIX F
Student Questionnaire

APPENDIX A: Needs Analysis Toolkit

22 July 2005

National Office Design and Learning Outcomes
Curriculum, Teaching and Learning Group
Vogel Building
Level 12 - 8 Aitken Street
P O Box 1666
Thorndon
WELLINGTON

Direct: 04 463 8213
Fax: 04 463 8270

Dear Principal

NCEA Professional Development Half Days

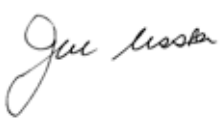
The Honourable Trevor Mallard wrote recently informing you of a support package for the further implementation of NCEA and Scholarship in your school. Included in this package was the provision of two half days when your school could be closed for NCEA and Scholarship professional development for your teachers. A requirement of the use of these two half days was that the professional development be needs-based and locally planned to best meet the particular situations of teachers in each school or a cluster of schools in the region. Additional funding has been allocated in your 1st July Operations Grant to assist with the provision of this professional development.

To support you to undertake a needs analysis and plan your professional development strategy the Ministry has contracted School Support Services in your region and has developed a starter kit in collaboration with the sector. The School Support Services group in your region has a contract that requires them to appoint staff to assist with the planning and organisation of these two half days. Advisory positions have been established for the remainder of the 2005 calendar year. These people are available to assist your school if you choose to use their services.

Enclosed please find the starter kit designed to assist you and your staff to identify and plan for the professional development. This kit includes the name of the School Support Services Advisor appointed to your region along with some ideas which may be of use to your staff when establishing the focus of the professional development in your school.

I wish you well in the planning and implementation of this professional development which may be taken between now and the end of term two 2006. Planning should be completed by the end of Term 4 2005 if you wish to use the support provided by School Support Services.

Yours sincerely



Jill Ussher
Project Manager
Professional Learning Strategy

TE TĀHUHU O TE MĀTAURANGA
Ministry of Education

Starter Kit for Schools

Planning Professional Development for Teachers Related to Training Needs for NCEA and Scholarship

Two Half Days

Contents of this Starter Kit

Context of the Professional Development

PROFESSIONAL DEVELOPMENT HALF DAYS FOR NCEA

1 This starter kit has been developed for schools to assist them to identify the professional development needs of their teachers, particularly those needs related to senior secondary school qualifications and NCEA. Some schools will also wish to use the time to consider Scholarship 2005 and beyond and how best to support students and teachers preparing for Scholarship.

2 In establishing teachers' professional development needs each school is expected to identify a focus/foci and agree on the expected outcome(s) of the particular programmes or strategies used in the school. It is anticipated that most schools will link the use of these two half days to improving student learning outcomes through the school's wider professional development programme.

3 The School Support Services will report on the progress of the implementation of the professional development programmes to the Ministry of Education in February 2006. This will provide an overview of the projects within each region and inform the Ministry of future needs and ways in which these can be addressed.

4 The Ministry of Education has established a research project to evaluate the effectiveness of this needs based and locally driven approach to PD. This research will take a case study approach (ten schools) and the results will be shared with all schools. It will also be used to inform future decisions around the delivery of PD.

Role of School Support Services

The main tasks of the School Support Services Advisors supporting this work will be to:

1. Provide support for schools to use the starter kit and in the identification of the professional development needs of staff.

2. Work with schools to plan their professional development strategies so that they relate to their current professional development plan.

3. Identify possible “experts” to assist schools achieve their goals for professional development.

4. Broker partnerships amongst and between schools to combine and to share expertise.

5. Prepare a report of the implementation of the professional development provided in their region, including some case studies, to describe the range and type of programmes developed.

Role of School Support Services

6 The advisers in each region are:

Region	Name	Address	Email contact
Northland	Norman Pratt Alison Collett	TEAM Solutions Faculty of Education University of Auckland Private Bag 9002 Whangarei	n.pratt@auckland.ac.nz
Auckland	Karl Mutch Margaret Bendall	TEAM Solutions Faculty of Education University of Auckland Private Bag 92601 Symonds Street Auckland	k.mutch@auckland.ac.nz
Waikato Bay of Plenty	Graeme Ryan Steve English	c/o Jane Barnett School of Education University of Waikato Private Bag 3105 Hamilton	g.ryan@taupocollege.ac.nz steve.english@clear.net.nz
Manawatu Taranaki Hawkes Bay	Colleen Douglas	Centre for Educational Development Massey University College of Education Private Bag 11222 Palmerston North	c.o.douglas@massey.ac.nz

Role of School Support Services

Wellington Wairarapa	Winton Clitheroe Rae Duff	School Support Services Victoria University of Wellington Box 17310 Wellington	winton.clitheroe@vuw.ac.nz rae.duff@vuw.ac.nz
Christchurch Nelson Marlborough West Coast Timaru	David Ayers	School for Professional Development Christchurch College of Education Box 31065 Christchurch	david.ayers@cce.ac.nz
Dunedin Southland	Ian Stevens	Dunedin College of Education Private Bag Dunedin	ian.stevens@dce.ac.nz

Possible Ways for Using the Professional Development Half Days

The nature of this professional development acknowledges that school communities have different needs at this stage of the NCEA implementation. The purpose of the provision of the two half days is to recognise that "one size does not fit all", and that schools and teachers know what their needs are. This is an opportunity to access time and expertise to support each school's decisions, directions, and professional development needs to support NCEA implementation to improve student achievement.

These two half days and the additional funding in the Operations Grant may be used between the beginning of Term 3 2005 and the end of Term 2 2006. Many schools will use this resource to enhance already identified professional development goals which are included within their current or long term strategic plan.

The more staff members are involved in the decision making about how the time and resourcing will be spent, the more likely they are to participate and take up the opportunity for worthwhile NCEA professional development.

The following suggestions are to assist schools determine how best to allocate the time provided to meet the professional development needs of their staff. Your local School Support Service is available to assist your school in aspects of this process.

Possible Ways for Using the Professional Development Half Days

Ways in which the time might be used could include:

1 Two half days or one full day with own staff at the school using staff expertise and/or outside "experts" such as School Support Services or consultants to meet the professional development need(s) identified in the needs analysis.

2 Combine/cluster with one or more schools to identify common professional development needs and share experiences and expertise.

3 Combine with other schools to share the cost of employing an "expert" to work with each of the schools over a period of time. The goal would be to assist teachers to develop/strengthen a particular skill e.g. teaching and using thinking skills as a technique to assist problem solving. Each school would plan for two half day workshops with the "expert" working with staff to progress the professional development. The "expert" could visit each school between the first and second half day of training to support the change process. Over the period of time all the schools in the cluster would have had similar support, two half days of intensive professional input, and the opportunity to practise the skills and gain new knowledge.

4 Cluster with schools in the region to develop resource material for assessment / teaching programmes / benchmarking / other.

5 In a cluster of schools, identify the professional development needs, e.g. HOD leadership and management of NCEA, student responses to NCEA or assessing to standards. Arrange for several strands of professional development on the day or days that the schools decide to close. Expertise can be purchased from within or outside the cluster or there may be expert support available from School Support Services in your region.

6 Support the training provided by establishing an on-line learning community, linking to "experts" and/or sharing resource development etc.

7 Use audio-visual links already established amongst secondary schools and wharekura to build, support and enhance on-line learning communities by identifying common needs and expertise as a result of combining the half days and sharing the costs of the professional development.

Focus Questions to Start Your Thinking?

FOCUS QUESTIONS

These focus questions were developed by a writing group consisting of secondary school principals, deputy principals, School Support Services personnel and Ministry of Education staff to provide a starting point for staff discussion. They cover a range of themes relating to the senior secondary school qualifications.

- Are there areas of NCEA implementation that still need work in your school?
- To what extent are your teachers confident in making assessment judgments across all 3 levels of NCEA?
- What evidence do you have that your teaching programmes are meeting the diverse needs of your students?
- Does your school draw from the NQF to provide multiple pathways that support a range of student goals?
- How are the professional learning needs of teachers in your school identified and supported, especially with regard to student achievement?
- How are you importing information from sources such as analysis of NCEA results, examiners' reports and moderation reports into the review of the school's teaching programmes?
- How is your school prioritising the development of higher level critical thinking in all its teaching programmes?
- How confident is your staff in identifying candidates suitable for Scholarship and designing teaching programmes which meet their needs?
- How confident are you that your teaching programmes across curricula complement each other and that any overlap is intentional?

Possible Ways To Engage Your Teachers in Reflecting on NCEA Associated Professional Development Needs

The following suggestions have been developed as possible starting points for engaging your staff on the identification of their professional development needs. (There is no expectation that any or all of them will be used to define your professional development strategy.)

1. Set up department discussion groups with focus questions and then ask teachers to complete a questionnaire, which identifies and evaluates particular aspects of the questions.

2. Involve the whole staff in a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis to determine needs relating to a particular issue e.g. over-assessment.

3. Analyse NCEA data including information from the external moderation reports, the examiners' reports, principal's nominee and the school's NZQA relationship manager, to identify any practices that might need to be changed. From there, identify possible professional development strategies that would support teachers' implementation of the desired changes.

4. Use an identified need to improve teachers' understanding of an issue. Provide time and support for teachers to plan the professional development for the identified issue(s). e.g. modify curriculum content material to provide appropriate levels of work for several groups within a class; the use of different strategies to engage students in their learning; prepare exemplar material for NCEA / Scholarship (levels and categories) to increase understanding / confidence in making assessment judgments.

5. List a set of possible directions for development and devise a set of questions for the teachers to respond to. Use this data to plan a strategy for professional development.

Possible Ways To Engage Your Teachers in Reflecting on NCEA Associated Professional Development Needs

6. Brainstorm, with the staff, school goals for 2006/2007 in terms of assessment/teaching programmes. Identify the barriers to achieving these and what needs to happen to remove the barriers. Decide on the professional development support required to achieve these goals.

7. Link back to the school's strategic plan and seek more information from staff, using a questionnaire, to identify the details of the professional development needs around an established goal.

8. Establish the concept of "Learning Communities" as a way in which to systematically support teachers to manage assessment for learning. e.g. A group of teachers decide to use formative assessment to inform their teaching programmes. They select current research papers around this subject, discuss the implications of the papers, and adjust their teaching methods and use of assessment according to their agreed understandings of the research.

Ideas to Include in a Questionnaire for use with Teachers

The contents of this questionnaire identify some of the issues that have been raised by various sector and focus groups. Some of these may become a starting point in identifying professional development needs in your school.

INDIVIDUAL TEACHER QUESTIONS

1. I am confident at analysing senior class data.
Not sure I_____I_____I Very confident

2. I use data to plan and inform my teaching programme.
Rarely I_____I_____I Always
An example of this is: _____
_____

3. I use data to modify my teaching practice.
Rarely I _____I_____I Always
An example is: _____
_____

4. I design learning activities that are appropriate for the range of students in front of me.
Rarely I_____I_____I Always
Give examples: _____
_____

5. I design assessment tasks that are relevant to for all my students (ethnicity/gender/ability).
Rarely I_____I_____ I Always

6. I am competent in designing valid assessment tasks.
Not sure I _____I_____I Very confident

7. I am confident about my assessment judgements.
Not sure I _____I_____ I Very confident
Please comment: _____
_____

Ideas to Include in a Questionnaire for use with Teachers

8. I am confident in my knowledge of the content that is assessed against the standards in the courses I teach.
Not sure I _____I_____I Very confident

9. My students choose which standards not to complete? (*Please circle where appropriate)*
- At level 1 internal/external
- At level 2 internal/external
- At level 3 internal/external
- Are there any particular standards that students are dropping - are there any patterns?

Please comment: _____
_____

10. I think there is room for redesigning courses to meet any of the above issues. Please comment: _____
_____
_____

The above questions could be adapted for HODs. New questions could include systems management, people management and course design.

Possible Useful References

The following resources contain readings that teachers may find useful as part of their professional learning.

"Communities of Practice: A brief introduction"
Etienne Wenger
http://www.ewenger.com/theory/communities_of_practice_intro.htm

"What is a 'Professional Learning Community'?"
Richard DuFour
Educational Leadership, May 2004

"Professional Learning Community"
Richard DuFour
http:info.csd.org/staffdev/rpdc/darticle.html

"Practical Research for Educators:
A Guide to Improving Classrooms and Schools"
Dr Mei Kuin Lai and Viviane Robinson
Corwin Press

			Interviews with school leaders	Pre-questionnaire	Post-questionnaire	Focus group interviews	Student surveys
	Direct source						
	Incidental source						
Needs Analysis: On what basis was the decision to cluster, or not to cluster with other schools made?							
Did schools find the needs analysis tools provided by the Ministry useful, and how did schools think it could be improved?							
How did schools manage the needs analysis process to identify individual teachers, departments and whole school needs?					**Q 10, 11**		
What needs were identified, and were there similarities across subjects, types of schools, geographic areas, teachers of different levels of experience?			**Q1**	**Q 11,12**			
Professional Learning Programmes: How did schools use the additional funding and school closure time to address needs?							
What personnel and other resources did schools use to facilitate the professional development?					**Q27**		
What topics or areas of focus were addressed in the professional development?					**Q11, 25**	**intro**	

Key			Interviews with school leaders	Pre-questionnaire	Post-questionnaire	Focus group interviews	Student surveys
	Direct source						
	Incidental source						
How did teachers and schools rate the quality of the professional development?			**Q2**	**Q13-21**	**Q 12,13, 21, 26, 28, 29**	**Q1**	
To what extent did teachers, departments and schools consider their identified needs had been met?				**Q11,12**	**Q 14, 15, 24, 28**	**Q4**	
Outcomes for Schools, Teachers and Students: What changes in school, department teacher processes and procedures were implemented as a result of the professional development?			**Q4**			**Q2**	
Has the professional development changed teachers' understandings, perceptions and issues related to NCEA and Scholarship implementation?			**Q3**		**Q18, 19**	**Q2**	
What shifts in teacher practice have resulted from the professional development?					**Q 17, 10, 22, 23**	**Q2**	
Have there been any shifts related to students' learning and achievement as a result of the professional development?					**Q16**	**Q3**	
Ongoing Development: Did schools/clusters plan any follow-up to the professional development?			**Q6**				
Did the process promote or support positive changes to department, school culture and/ or links to professionals in other schools?			**Q5**				
Are schools likely to use the needs analysis tools in the future?			**Q7**				

APPENDIX C
Pre-Questionnaire

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

NCEA Professional Development Project

PRE-QUESTIONNAIRE

Victoria University of Wellington College of Education
Te Whānau o Ako Pai ki Te Whare Wānanga o te Ūpoko o te Ika a Maui

SECTION 1: DEMOGRAPHIC DATA

1. Name of school:
   _____

2. Gender *(Please tick)*:

Male	☐
Female	☐

3. First subject area: _____
   Second subject area: _____

4. Are you a head of department in your school? *(Please tick)*

	☐
No	☐

5. Are you a PD co-ordinator for NCEA in your school? *(Please tick)*

Yes	☐
No	☐

6. How many years of secondary teaching experience (including 2005) do you have?

	☐
3-5 years	☐
6-10 years	☐
10-20 years	☐
More than 20 years	☐

7. How confident are you at accurately assessing student work for NCEA? *(Please circle)*

Very confident		sometimes confident		Not at all confident
5	4	3	2	1

8. Which of the following professional learning activities have you taken part in during 2005?

National Scholarship workshop	☐
Formal study for undergraduate degree, certificate or diploma	☐
Formal study for postgraduate degree, certificate or diploma	☐
Curriculum based workshop	☐
Conference	☐
Short course	☐
Participating in teacher networks (online or face to face)	☐
Award for study leave	☐
Other (please specify)_____	☐

SECTION 2: PROFESSIONAL DEVELOPMENT FOR NCEA (all schools)

9. How important is it for you to participate in further professional development related to the NCEA? *(Please circle)*

Very important		Of some importance		Of little importance
5	4	3	2	1

10. How do your expressed professional learning needs influence the PD provided to you? *(Please circle)*

All PD linked to my expressed needs		Some		No PD linked to my expressed needs
5	4	3	2	1

11. Identify the areas, or knowledge/skills, that you would like further professional development to cover in relation to NCEA

(i) _____
_____

(ii) _____
_____

(iii) _____
_____

(iv) _____
_____

(v) _____
_____

12. Rate your own knowledge and skills in teaching and assessing for the NCEA in relation to your first subject area. *(Please circle)*

Excellent		Satisfactory	Inadequate	
5	4	3	2	1

13. In general, what is your preferred mode of engagement for PD? *Rank in order the **top four only**: 1, 2, 3, 4; place your ranking in the column.*

	Rank
Clustering with teachers from other schools or wharekura	
Professional development within own school or wharekura	
Individual professional development through short courses	
Individual professional development leading to a qualification	
Attendance and participation in professional conferences	
Participating in an on-line learning community	
Subject specific network meetings and communication across schools or wharekura	
Linking professional development with my personal appraisal goals	
Other *(Please specify)*	

_____

_____

14. In relation to further PD on NCEA, what is your preferred format for delivery? *Rank in order the **top four only:** 1, 2, 3, 4; place your ranking in the column below.*

	Rank
Clustering with other schools for common PD needs, sharing experiences and expertise	☐
Own school only, using staff expertise or outside experts (eg. School Support Services) to meet your school's identified PD needs	☐
Contracting with an outside expert to work with my school or wharekura over time, focussed on particular PD needs/issues	☐
Clustering with other schools to develop resource material on assessment, or teaching, or benchmarking, or other	☐
Clustering with other schools, identifying several strands for PD, with participants selecting the strand of their choice on the days schools are closed for PD	☐
Establishing an on-line learning community, linking to experts and/or sharing resource development	☐
Using established audio-visual links with schools and wharekura to build, support and enhance on-line communities, with a focus on common PD needs for NCEA	☐
Engaging in field trips and other demonstrations of good practice or innovations in my subject	☐
Examining and discussing complete exemplars of good practice (trialled assessments and model answers)	☐
Other *(Please specify)*	☐

_____

_____

15. In **column A** below, please rate how important each of the listed characteristics is for your participation generally in professional development meetings/workshops. *Use the following scale for your ratings.*

5 = very important
4 =
3 = of some importance
2 =
1 = of little importance

In **column B** below, please tick (✓) whether each of the listed characteristics has typified your previous participation in professional development meetings/workshops on NCEA/Scholarship

	A Importance for own participation	**B** Previous PD experience on NCEA
The PD acknowledges what I want and need		
The PD provides new knowledge covering theory, content or alternative practices		
The PD engages me in examining good teaching within my own setting		
The PD involves the collection and analysis of data from my own setting		
The PD provides for critical reflection and the challenging of existing beliefs		
The PD supports educational practice that is inclusive of student diversity		
The PD helps me to change practices, beliefs and attitudes		
The PD empowers me to further my own professional development		

16. In **column A** below, based on your own experience, rate the importance of each factor for their contribution towards effective PD. *Use the following scale for your ratings.*

5 = very important
4 =
3 = of some importance
2 =
1 = of little importance

In **column B** below, please rank in order the **top four** characteristics in terms of their importance to you. *Rank 1 = most important, 2 = second most important, etc.*

	A Rate each from 5 to 1	**B** Rank top 4: 1, 2, 3, 4
Being offered content that meets my needs in my subject area		
Preparing key goals and objectives at the beginning of the programme		
Having a team approach		
Having facilitators that understand the context and needs of participants		
Using the school as the main venue		
Utilising workshops/short courses		
Stating clear learning outcomes for participants		
Keeping everyone focused, including facilitators		
Ensuring adequate time for reflection on new ideas		
Having opportunity in PD to apply new ideas in practice		

17. What kinds of resources have you generally found useful for PD related to the NCEA? (*Please tick)*

Exemplars	
Resource books and/or materials	
Assessment guides and/or marking schedules or rubrics	
Examples of student work with indications of assessment judgments	
Sample tests	
Other *(Please specify)*	

Other *(Please specify)* ☐

---

18. In **column A** below, please indicate if you have had the following experiences.

    In **column B** below, please indicate how useful those experiences that you have ticked in column A have been for you. *Use the following scale for your rating.*

    5 = very useful
    4 =
    3 = of some use
    2 =
    1 = of little use

	A Please tick (✓)	**B** Rate each from 5 to 1
A marker for external examinations for NCEA		
A moderator of school-based assessments for NCEA		
A regional or national facilitator for the implementation of NCEA		
Other NZQA responsibilities for NCEA such as panel leader, resource developer, NAP member		
Scholarship facilitator		
Principal's nominee		

19. In **column A** below, based on your own experience from any type of PD, rate each characteristic of **PD facilitators or presenters** for their importance. *Use the following scale for your ratings:*

5 = very important
4 =
3 = of some importance
2 =
1 = of little importance

In **column B** below, please rank in order the **top four** characteristics in terms of their importance to you. *Rank 1 = most important, 2 = second most important, etc.*

	A Rate each from 5 to 1	**B** Rank top 4: 1, 2, 3, 4
Good knowledge of theory about pedagogy		
Good practical expertise in teaching my subject		
Good communication and relationship skills		
Good reflective thinkers and practitioners		
Good ability to challenge thinking and practice		
Good evaluation skills to collect and interpret data		
Good at keeping us on track		
Good follow-up and feedback skills		
Good knowledge of our school's needs		
Good at modelling appropriate practice		

20. List the **four** factors which, in your opinion, are the most important in **contributing towards effective** PD

(i) _____
_____

(ii) _____
_____

(iii) _____
_____

(iv) _____
_____

21. List the **four** factors which, in your opinion, are the most significant **barriers** to effective PD

(i) _____
_____

(ii) _____
_____

(iii) _____
_____

(iv) _____
_____

APPENDIX D

Post-Questionnaire

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

NCEA Professional Development Project

POST-QUESTIONNAIRE

This questionnaire refers to the recent school or cluster-based NCEA/Scholarship professional development that included the two half-days school closure.

Please do not complete this if you did not take part in this professional development.

Victoria University of Wellington College of Education
Te Whānau o Ako Pai ki Te Whare Wānanga o te Ūpoko o te Ika a Maui

SECTION 1: DEMOGRAPHIC DATA

1. Name of school:
   _____

2. Gender *(Please tick)*: Male ☐ Female ☐

3. First subject area: _____
   Second subject area: _____

4. Are you a head of department or teacher in charge of a subject in your school? *(Please tick)*

   Yes ☐
   No ☐

5. Are you a PD co-ordinator for NCEA in your school? *(Please tick)*

   Yes ☐
   No ☐

6. (a) How many years of secondary teaching experience do you have? *(Please tick)*

2 years or less	
3-5 years	
6-10 years	
10-20 years	
More than 20 years	

(b) How many years experience do you have of assessing students for NCEA? *(Please tick)*

4 years	
3years	
2 years	
1 years	
Less than one	

(c) If less than 4 years experience, please indicate the reason. *(Please tick)*

New to teaching	
New to teaching in New Zealand	
Returning to teaching	
Other reason (please explain)……	

7. How confident are you at accurately assessing student work for NCEA? *(Please circle)*

Very confident		sometimes confident		Not at all confident
5	4	3	2	1

8. (a) Which of the following professional learning activities have you taken part in during 2005?

Subject scholarship workshop	
Formal study for undergraduate degree, certificate or diploma	
Formal study for postgraduate degree, certificate or diploma	
Curriculum-based workshop	
School-based professional development	
Conference	
Short course	
Participating in teacher networks (online or face-to-face)	
Award for study leave	
Other (please name) ……	

(b) Which of the following NCEA training days have you taken part in (2000-2004)? *(Please tick)*

Level 1	
Level 2	
Standards based assessment design	
Level 3	

SECTION 2: PROFESSIONAL DEVELOPMENT FOR NCEA (all schools)

9. How important was it for you to have participated in the latest round of professional development related to the NCEA? *(Please circle)*

Very important		Of some importance		Of little importance
5	4	3	2	1

10. In the column below, please indicate the extent to which you feel you were able to influence the content and delivery of the recent PD.

Use the following scale for your ratings:

5 = very much so
4 =
3 = to some extent
2 =
1 = not at all

	Rate
I was personally asked what my NCEA learning needs were	
I was unaware of the PD until it happened	
I felt my expressed learning needs were met	
I felt I was part of the process that decided on the PD	
I was able to have input if I wanted to	

11. What were the aims of the professional development that you attended?

_____
_____
_____
_____
_____

12. List up to **three** factors which, in your opinion, contributed **most** towards the effectiveness of the latest PD for NCEA

(i) _____
_____

(ii) _____
_____

(iii) _____
_____

13. List up to **three** factors which, in your opinion, contributed **least** towards the effectiveness of the latest PD for NCEA

(i) _____
_____

(ii) _____
_____

(iii) _____
_____

14. Do you think that the pace and focus of the latest PD for NCEA fitted your needs? *(Please circle)*

Always		Some of the time		Rarely
5	4	3	2	1

15. Do you think you achieved your professional goals and objectives as a result of participating in the latest PD for NCEA? *(Please circle)*

Yes, very much so		To some extent		Not at all
5	4	3	2	1

16. Do you think that the latest PD you have been involved in for NCEA will contribute to improving the quality of learning outcomes for students? *(Please circle)*

Yes, very much so		To some extent		Not at all
5	4	3	2	1

17. Do you think that the latest PD you have been involved in for NCEA has improved the quality of your teaching? *(Please circle)*

Yes, very much so		To some extent		Not at all
5	4	3	2	1

18. Do you think that the latest PD you have been involved in for NCEA has improved your knowledge of how to assess for NCEA? *(Please circle)*

Yes, very much so		To some extent		Not at all
5	4	3	2	1

19. Do you think that the latest PD you have been involved in for NCEA has improved your knowledge generally of theory and practice in how to assess student learning? *(Please circle)*

Yes, very much so		To some extent		Not at all
5	4	3	2	1

20. Rate your own knowledge and skills in assessing for the NCEA in relation to your first subject area. *(Please circle)*

Excellent		Satisfactory		Inadequate
5	4	3	2	1

21. In the column below, please rate how effectively each of the following elements has been covered in your latest PD for NCEA. *Use the following scale for your ratings:*

5 = very effective
4 = effective
3 = partially effective
2 = not very effective
1 = not effective

	Rate
Content (coverage and relevance of topics)	
Process (effective facilitation and organisation)	
Context (relevance to your teaching situation)	
Materials (if included in your PD) (provision of relevant exemplars and background resources)	

22. How easy has it been to apply new knowledge and insights from your latest PD for NCEA to your teaching? *(Please circle)*

Very easy		Fairly easy		Not at all easy
5	4	3	2	1

23. In the column below, please indicate the extent to which your thinking and practices have changed as a result of the latest PD for NCEA. *Use the following scale for your ratings:*

5 = very much so
4 =
3 = to some extent
2 =
1 = not at all

	Rate
Theoretical understanding of assessment	
Assessment approaches and strategies	
Confidence in making assessment judgements	

24. In **column A** below, please rate how important each of the listed characteristics has been for your participation generally in professional development meetings/workshops. *Use the following scale for your ratings:*

5 = very important
4 =
3 = of some importance
2 =
1 = of little importance

In **column B** below, please rate the extent to which each of the listed characteristics was a feature of your latest PD for NCEA. *Use the following scale for your ratings:*

5 = very much so
4 =
3 = to some extent
2 =
1 = not at all

	A Importance generally for PD (Rate 5 to 1)	**B** Feature of latest PD for NCEA (Rate 5 to 1)
The PD acknowledged what I wanted and needed		
The PD provided new knowledge covering theory, content or alternative practices		
The PD engaged me in examining good teaching within my own setting		
The PD involved the collection and analysis of data from my own setting		
The PD provided for critical reflection and the challenging of existing beliefs		
The PD supported educational practice that is inclusive of student diversity		
The PD helped me to change practices, beliefs and attitudes		
The PD empowered me to further my own professional development		
The PD improved my practice		
The PD developed my confidence		

25. In the column below, please rate the effectiveness of the latest PD for NCEA in relation to each of the themes listed. *Use the following scale for your ratings:*

5 = very effective
4 =
3 = partially effective
2 =
1 = not effective

Improving students' learning outcomes	
Improving your teaching capability	
Working collaboratively with your colleagues	
Meeting the diverse learning needs of students	
Meeting the needs of high performing students	
Focussing on our school goals	
Clarifying assessment judgements	
Meeting the needs of students in the middle	
Meeting the needs of low-performing students	

26. In **column A** below, based on your own experience, rate the importance generally of each factor for its contribution towards effective PD. *Use the following scale for your rating:*

5 = very important
4 =
3 = of some importance
2 =
1 = of little importance

In **column B** below, please rank in order the **top four characteristics** in terms of their importance to the latest PD you undertook for NCEA.
Rank 1 = most important, 2 = second most important, etc.

	A Importance for PD Rate 5 to 1	**B** Rank top 4: 1, 2, 3, 4
Being offered content that meets the needs of your school or wharekura		
Preparing key goals and objectives at the beginning of the programme		
Having a team approach		
Having facilitators that understand the context and needs of participants		
Using the school as the main venue		
Utilising workshops/short courses		
Stating clear learning outcomes for participants		
Keeping everyone focused, including facilitators		
Ensuring adequate time for reflection on new ideas		
Having opportunity in PD to apply new ideas in practice		
Getting feedback on what I am doing		

Complete Questions 27-29 if your PD was facilitated.

27. Who facilitated the professional development? *(tick more than one box if appropriate)*

The facilitator was:

A staff member at my school	
A subject specialist	
A practising teacher from another school	
An adviser	
Other (please explain) ……..	

28. In **column A** below, based on your own experience generally, rate each of the following characteristics of PD facilitation or presentation for its importance. *Use the following scale for your ratings:*

5 = very important
4 =
3 = of some importance
2 =
1 = of little importance

In **column B** below, please rate the quality of the facilitation you experienced in relation to the latest PD for NCEA. *Use the following scale for your rating:*

5 = very much so
4 =
3 = to some extent
2 =
1 = not at all

	A Importance generally for PD (Rate 5 to 1)	**B** Quality of latest PD for NCEA (Rate 5 to 1)
The facilitator demonstrated good knowledge of theory about pedagogy		
The facilitator demonstrated good practical expertise in teaching my subject		
The facilitator demonstrated good communication and relationship skills		
The facilitator demonstrated good reflective skills		
The facilitator challenged thinking and practice		
The facilitator demonstrated good research skills in collecting and interpreting data		
The facilitator kept us on track		
The facilitator demonstrated good follow-up and feedback skills		
The facilitator demonstrated good knowledge of our school's needs		
The facilitator modelled good educational practice		

29. In the column below, please rate the quality of the facilitation you experienced in relation to the latest PD for NCEA. *Use the following scale for your ratings:*

5 = very much so
4 =
3 = to some extent
2 =
1 = not at all

	Rate
The facilitator was generally knowledgeable in areas important to you	
The facilitator was helpful in assisting you to apply this knowledge	
The facilitator was able to encourage discussion	
The facilitator was sensitive to time requirements for understanding and applying new learning	
The facilitator was effective at encouraging self reflection	

Thank you for participating in this research.
Your contribution is important to us.

APPENDIX E

Frequencies and Percentages of Students Responding to each Category of each Item

Table D1. Item 1: *I think NCEA is good for my learning*

Rating	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely not true	20	11.6	11	4.9	31	7.8
2. Probably not true	38	22.1	31	13.8	69	17.4
3. Not sure	23	13.4	61	27.2	84	21.2
4. Probably true	70	40.7	91	40.6	161	40.7
5. Absolutely true	21	12.2	28	12.5	49	12.4
Total respondents	172	100.0	222	99.1	394	99.5

Table D2. Item 2: *NCEA means that teachers spend too much time on assessment rather than teaching*

Rating (reverse scale)	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely true	25	14.5	20	8.9	45	11.4
2. Probably true	60	34.9	61	27.2	121	30.6
3. Not sure	32	18.6	78	34.8	110	27.8
4. Probably not true	46	26.7	51	22.8	97	24.5
5. Absolutely not true	9	5.2	11	4.9	20	5.1
Total respondents	172	100.0	221	98.7	393	99.2

Table D3. Item 3: *NCEA is not working well in my school*

Rating (reverse scale)	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely true	10	5.8	13	5.8	23	5.8
2. Probably true	38	22.1	37	16.5	75	18.9
3. Not sure	53	30.8	85	37.9	138	34.8
4. Probably not true	51	29.7	68	30.4	119	30.1
5. Absolutely not true	19	11.0	18	8.0	37	9.3
Total respondents	171	99.4	221	98.7	392	99.0

Table D4. Item 4: *My family/whānau think that NCEA will give me a good qualification*

Rating	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely not true	33	19.2	18	8.0	51	12.9
2. Probably not true	38	22.1	37	16.5	75	18.9
3. Not sure	34	19.8	47	21.0	81	20.5
4. Probably true	52	30.2	85	37.9	137	34.6
5. Absolutely true	13	7.6	35	15.6	48	12.1
Total respondents	170	98.8	222	99.1	392	99.0

APPENDIX E (continued)

Table D5. Item 5: *My teachers have prepared me well for this year's NCEA assessment*

Rating	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely not true	7	4.1	7	3.1	14	3.5
2. Probably not true	25	14.5	23	10.3	48	12.1
3. Not sure	28	16.3	62	27.7	90	22.7
4. Probably true	83	48.3	98	43.8	181	45.7
5. Absolutely true	28	16.3	31	13.8	59	14.9
Total respondents	171	99.4	221	98.7	392	99.0

Table D6. Item 6: *NCEA makes me focus too much on what will be tested, rather than on learning the subject*

Rating (reverse scale)	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely true	71	41.3	62	27.7	133	33.6
2. Probably true	61	35.5	93	41.5	154	38.9
3. Not sure	14	8.1	30	13.4	44	11.1
4. Probably not true	16	9.3	26	11.6	42	10.6
5. Absolutely not true	10	5.8	11	4.9	21	5.3
Total respondents	172	100.0	222	99.1	394	99.5

Table D7. Item 7: *I am not getting enough information and guidance about how my NCEA assessments are marked*

Rating (reverse scale)	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely true	26	15.1	40	17.9	66	16.7
2. Probably true	46	26.7	56	25.0	102	25.8
3. Not sure	17	9.9	49	21.9	66	16.7
4. Probably not true	47	27.3	62	27.7	109	27.5
5. Absolutely not true	35	20.3	14	6.3	49	12.4
Total respondents	171	99.4	221	98.7	392	99.0

Table D8. Item 8: *My school has given me good advice on the NCEA qualifications that I need for my future*

Rating	2005 End-of-year Group		2006 Start-of-year Group		Combined Sample	
	frequency	percentage	frequency	percentage	frequency	percentage
1. Absolutely not true	10	5.8	12	5.4	22	5.6
2. Probably not true	30	17.4	36	16.1	66	16.7
3. Not sure	24	14.0	40	17.9	64	16.2
4. Probably true	57	33.1	92	41.1	149	37.6
5. Absolutely true	51	29.7	42	18.8	93	23.5
Total respondents	172	100.0	222	99.1	394	99.5

APPENDIX F

Student Experience Survey

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

NCEA Student Experience Survey

Victoria University of Wellington College of Education
Te Whānau o Ako Pai ki Te Whare Wānanga o te Ūpoko o te Ika a Maui

NCEA Student Experience Survey

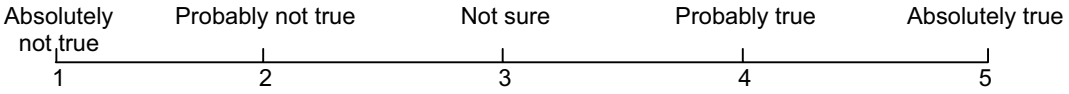
*Instructions: There are 8 statements about NCEA for you to rate and two open-ended questions. There are no "right" or "wrong" answers – we are interested in what **you** think and what **you** believe to be true!*

RATINGS

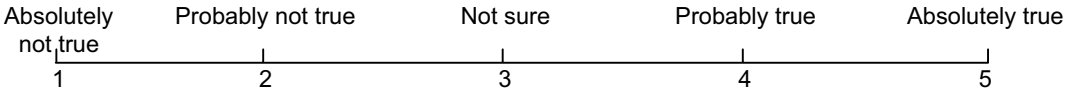
Please give your opinion about each sentence below by rating whether you think the sentence is true or not, using this scale (please circle the number closest to your opinion):

1 = Absolutely not true
2 = Probably not true
3 = Not sure
4 = Probably true
5 = Absolutely true

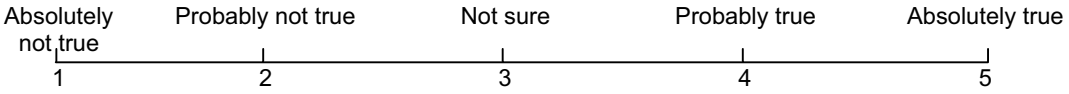
1. I think NCEA is good for my learning.



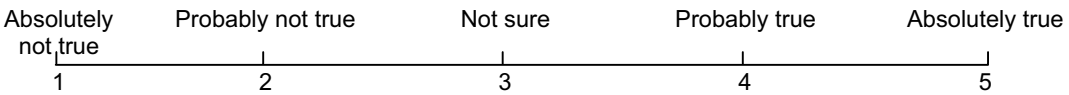
2. NCEA means that teachers spend too much time on assessment rather than teaching.



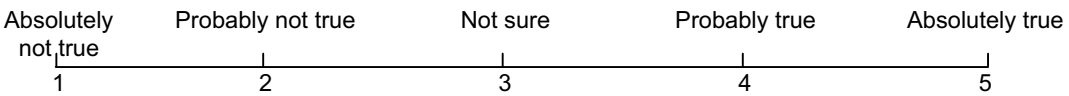
3. NCEA is not working well in my school.



4. My family/whānau think that NCEA will give me a good qualification.

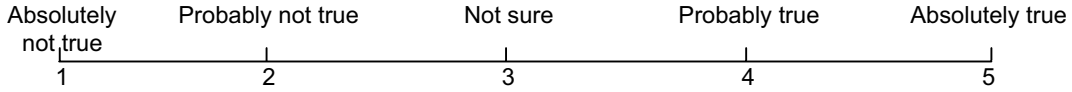


5. My teachers have prepared me well for this year's NCEA assessments.

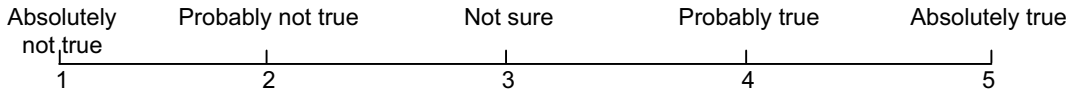


Please turn over →

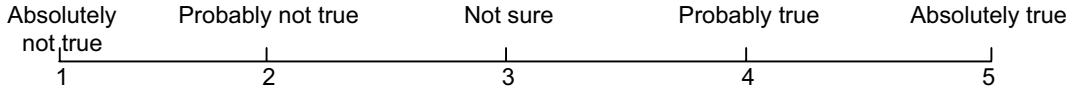
6. NCEA makes me focus too much on what will be tested, rather than on learning the subject.



7. I am not getting enough information and guidance about how my NCEA assessments are marked.



8. My school has given me good advice on the NCEA qualifications that I need for my future.



OPEN-ENDED

For each of the next two questions, please list up to three things:

9. What three things do you like *most* about NCEA?

(i) _____

(ii) _____

(iii) _____

10. What three things do you like *least* about NCEA?

(i) _____

(ii) _____

(iii) _____


SCIENCE