



# Investigating responses to diversity in a secondary environment

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# 1. Aims, objectives and research questions

## Introduction

Linwood College is an urban, co-educational, decile 2 school with a roll of 880 students from Years 9–13. Its student population is diverse in many ways: culture, race, academic ability, attitude to schooling, home socioeconomic status, personality and personal interests, and ability to cope with instructional English. In terms of ethnicity, the students are predominantly European New Zealanders, Māori, and Pasifika. The school also has international students from Asia, South and North America, Africa, and Europe.

The college delivers a broad curriculum, inline with national requirements, and caters for students across the academic and social spectra.

In its strategic vision and its policy statements the school is committed to embrace and celebrate aspects of diversity. At the same time, staff wrestle with pressures that often appear to be oppositional—curriculum delivery, assessment requirements, and the fostering of meaningful learning for diverse learners. In this project, the school wanted to examine its current practices in responding to diversity and investigate ways to narrow the gap between policy and practice.

## Aim of the project

The aim of the project was to examine how Linwood College responded to the diversity of its students. Findings from the research will be used to inform future policies and practices. A further aim of the project was to develop a core group of teachers as critically reflective practitioners who have the capacity and capability within the school to research their own practice, and thus build a research platform for change. It is hoped that this core group will become mentors for their colleagues in the future.

## Objectives

The aims above gave rise to the following specific objectives:

- to examine school-wide systems and policies relating to diversity
- to examine departmental strategies on diversity
- to examine teaching practices in relation to diversity
- to sample student voice concerning a wide range of learning and social outcomes
- to develop the skills of participating teachers as researchers.

## **Research questions**

The overarching question was:

- How is the school aligning policies and practices to help support teachers to facilitate learning for diverse learners?

From this research question came a number of specific investigative questions. They were:

- How are school-wide systems and policies impacting on the ability of departments and teachers to respond to the diversity of their students?
- What departmental strategies target a response to diversity?
- How do teachers respond to the diverse needs of students in their classes?
- What are the students' understandings of their experiences in the classes where teachers consciously address diversity in their pedagogies?

## 2. Research design and methodology

### **General approach**

This project was a case study investigating Linwood College as a learning community in 2005. It was also a series of embedded case studies (Scholz & Tietje, 2002), in that different parts of the larger project formed smaller case studies in their own right. All of the small projects undertaken as part of this initiative were connected by the need to address and respond to raising awareness across the school of the multidimensional nature of diversity. Small groups of teachers chose to investigate particular aspects of diversity in the light of existing literature, using appropriate strategies for addressing their particular area of study.

The approach taken was action research, in which investigation, planning, action, and further investigation are integrated into a cyclic pattern of research and reflective action (Cardno, 2003; Stringer, 2004). It was informed by the principles of action research in being participatory, critical, and emancipatory (Wadsworth, 1998; Zuber-Skeritt, 1992).

The overarching project within the school had a number of embedded components: critical analysis of policy, reflective practice, and students' voices.

### **Critical analysis of policy**

School-wide policies and practices were analysed for their alignment with the school's commitment to addressing diversity. This involved document analysis, two questionnaires, and structured interviews with middle management staff. As a result of this project, further revision of the school's policies will occur in 2006. How the school implements these policies will also be considered. It became apparent that individual staff members and various policies consider diversity from multiple and often differing perspectives. Reflection on these understandings is part of the intended outcome of this project.

### **Reflective practice**

Eight teachers and two tertiary researchers for the Christchurch College of Education were involved in the case studies. Some teachers worked on an individual case study while others worked in small groups of two or three. Each group selected a different aspect of diversity that



they saw as important to their own work. The researchers acted as mentors to guide the teachers in their reading and develop their research understandings. The teachers also found their own sources for valuable information about their areas of focus and research methods. The mentoring process was mostly conducted through focus-group meetings, but also included one-on-one coaching in person and online.

The groups shared their understandings at the focus-group meetings. Some of these were held at the school, after school hours, and for two meetings the teachers were released from classes for the afternoon to come to meetings at the College of Education. At these meetings, the teachers formulated their questions, reviewed their growing understandings, and developed a research process and method. Shared reflection allowed them to discuss their changing practice and the responses they received from their students. The teachers were also mentored through the writing phase of their projects. Their original case study reports have been edited and included in this report.

## **Student voices**

The value of student voice is illustrated in the *Te Kotahitanga* research project (Bishop, Berryman, Tiakiwai, & Richardson, 2003), in which student voices were used to investigate how a number of influences were experienced by Māori students. Nuthall (2002, p. 45) has also emphasised that “teachers must have an understanding of how their actions or requirements affect what is going on in the minds of their students”.

Student voices were used to provide data for the teachers who specifically examined their classroom practices. Students’ comments are quoted in the individual reports. The primary data-gathering instrument for this was student interviews. In two nested case studies (English and social studies), the electronic journals kept by students were used as a source of student voice.

## **Developing effective partnerships**

This project involved a partnership between teachers at Linwood College and two researchers from the Christchurch College of Education. This partnership was established through consultation with the principal and the teacher who would be the project leader within the school. Lindsey Conner had previously been a teacher at the school and had previously worked with its staff on the Ministry of Education’s Schools Making a Difference (SMAD) initiative, so there was a history of trust and mutual respect. There was also an understanding about what the school wanted to focus on and what might be needed to motivate and implement such a project. Such an understanding takes time to establish. It was fortunate that it was already in place before the project began. The school also has a reputation for participating in new initiatives, and is currently

carrying out six other research-related projects. It is a school that wants to make a difference for its students.

The initial discussions centred around the focus and scope of the project. They aimed to establish common understandings and develop a protocol for working together that included a process for elective participation in the action research teams and agreed funding arrangements.

Once the project was established, it was important to have regular meetings between the teachers and the tertiary mentors to keep the process moving. These meetings provided occasions to discuss process and progress, troubleshoot any hitches, make plans, and tease out emergent themes. Towards the end of the project, the researchers spent three full days at the school to help the teachers with their writing and provided subsequent one-on-one mentoring by email.

## **Ethical issues**

Ethical approval for the project was gained from the Christchurch College of Education Ethics Committee. Its guidelines were followed for specific procedures and processes to protect the participants who chose to participate. The school was very willing to be identified as the school undertaking this research project. The nature of the project (i.e., researching a particular, identifiable community) made it difficult to preserve the teachers' anonymity, but we negotiated how the information that they provided would be used. The teachers were also involved in writing and disseminating the findings, including presenting at the NZARE conference at the end of 2005.

The rights and obligations of the researcher–researched relationship were clearly stated in an information letter to participants. The participants gave written consent, which included their right to withdraw from the project at any time. Only members of the research team have access to any raw research data.

Individual students were offered anonymity. Informed consent was gained from the students in the classes where teachers were observing their own practices. Students were also consulted before allowing TVNZ to film classes in action, and to report the project on “The Breakfast Show”.



## 3. Findings

### General findings

The project was couched in the context of one school trying to grapple with a phenomenon experienced by many schools throughout New Zealand, that of an increasingly diverse student population. Therefore, there was a need to examine what the school was currently doing to enable teachers to respond to the diverse needs of their students (Biddulph, Biddulph, & Biddulph, 2003; Bishop, Berryman, Tiakiwai, & Richardson, 2003).

Initially, the teachers found it difficult to define diversity, since it has multiple dimensions. Alton-Lee (2003, p. v) defines diversity as encompassing “many characteristics including ethnicity, socio-economic background, home language, gender, special needs, disability, and giftedness”. She points out that “teaching that is responsive to student diversity can have very positive impact on low and high achievers at the same time” (p. v). Given this statement, the teachers had to reflect on how they could address multiple diversities (even within an individual student) at the same time. This is no small task. One of the positive outcomes of this initial process was that teachers had to seriously think about what they meant by diversity. This is perhaps encompassed by Fraser and Spiller (2001), who state:

Students are not empty vessels ... They are individuals with unique constellations of needs, abilities, traits and behaviours. Effective teachers recognise this and therefore endeavour to match the students’ readiness, prior knowledge and motivational needs. This requires that teachers avoid blaming students for not learning. Instead, they carefully examine their own practices to ensure they are not impeding students’ development, and they innovate, adapt and expand in order to provide meaningful, rich and stimulating learning experiences. (p. 70)

The analysis of school policies and subsequent interviews with HoDs revealed that many had different conceptions of diversity and gave different emphasis to different dimensions (as discussed in *Case study 1: Policy analysis*). The science department study also revealed that staff had different notions about diversity and how it should or could be addressed. The discussions have helped the staff to arrive at more of a shared understanding about what is meant by multiple diversities. Some staff now face a challenge over their beliefs and assumptions about the concept of “other” and how teachers might embrace and use the diverse characteristics of the students they have in their classes (as indicated by Cummins, 2003). This is in line with *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis* (Alton-Lee, 2003), which emphasises the

need to recognise the diversity within individual students and how this is influenced by the intersections of gender, cultural heritage(s), socioeconomic background, and talent.

Rodriguez (2005) discusses how difficult it is for teachers to change their long-held beliefs and value systems and so change their teaching practices. It seems that such resistance is often linked to a belief that to achieve well, students simply need to work hard enough. For teachers to address the issues of diversity effectively, they need to be more aware of how these differences influence learning. They also need to be confident that their knowledge and processes will have some effect so that they are more likely to implement more culturally congruent and socially relevant approaches (Rodriguez, 2005). The teachers in this project are emergent in their knowledge, understanding and skills, but the action research process (and the group sharing this has entailed) has focused their attention on addressing diversity and enhanced their teaching approaches.

At a recent meeting we asked the question: What are the biggest things we are learning from this project? It was suggested that the single strongest factor in addressing diversity effectively in classrooms was recognising the mindsets (assumptions, expectations, blinkers) that each of us brings to our work. The discovery seems very simple when put into words, but it held the truth of an “ah-ha” moment for many of the participants, who recognised in it a challenge for change that would be the next stage of their development as teachers. Brookfield (1995) indicates that examining assumptions is essential to critical reflective practice. The teachers have also developed their awareness of the complexities and contingent factors that influence how they operate as professionals (Grainger, 2003) who continually have to make decisions and choices about teaching.

## Summary of general findings

The teachers who elected to be part of the action research have shown enormous enthusiasm for investigating an issue that they see as relevant to their particular practice, and for developing their own skills and knowledge as researchers. Developing and carrying out mini action-research projects while also teaching is challenging for teachers.

The research demonstrated that diversity within a classroom is very dynamic, in that the needs of students change with time. For example, a theme or topic that individuals might find interesting in one circumstance could be problematic if personal circumstances change (as found in the study of able students in social studies).

Through the research process, the teachers gained a greater awareness of factors that contribute to student learning. The specific details they reflected on led the teachers to identify aspects of their practice that they could modify. There was not sufficient time, within the scope of this project, to establish whether these modifications led to changes in student outcomes.

## **Specific findings**

Groups of teachers established and investigated the following projects as separate case studies. These have been written up and presented individually as appendices. The following is a summary of their findings for each of the case studies.

### **Case study 1: Policy analysis**

The school-wide policy analysis identified a commitment to several diversities within the college, primarily those of culture, race, socioeconomic background, and educational needs, but also those of social diversity, home background, and parental/guardian relations. This did not include diversities such as age range (which are more evident in year levels), or specific pastoral needs and subject areas. This analysis was not evidence of the implementation of strategies to address diversity. Rather, it reflected the intent to provide flexibility to meet the needs of diversity. However, little was actually in the policies that indicated how the school could celebrate diversity or make use of diversity for positive outcomes. The research showed that there was a need to question the use of generic language for policy statements and explore concepts such as “fairness” rather than “equality”. The researcher has identified a need to review the school’s policies to ensure they express shared understandings of diversity and develop ways of implementing those policies.

### **Case study 2: Addressing diversity in science through planning schemes and teaching approaches**

This study considered the use of computer-based teaching schemes (a teacher resource) to classify classroom activities and strategies (including the use of a common language and notation for strategy types) and incorporate them into teaching practice. The basis for this was the Science “Road Map”, which is an electronic scheme of work linking to resources, developed by the college’s science department to provide a system to communicate overviews of units between staff in the department. It grew to incorporate lessons and teaching–learning strategies, suggested vocational and cultural considerations, literacy and numeracy requirements, and the social skill levels required for particular pedagogies. The inclusion of hints about what teachers need to do to set up activities distinguishes this model from previous unit plan outlines. Also, because of its electronic format, teachers are able to access and modify it whenever they choose.

This project reports how the Road Map was expanded to enable science department staff to consider multiple aspects of diversity and draw on the range of activities provided. Gaps in the Road Map were identified, some of which will be the focus for developmental activities in 2006. The science department identified and developed a system that will help them to implement teaching and learning strategies that meet the needs of diverse learners. They also identified potential teacher and student resources for development.

### **Case study 3: Responding to diversity in physical education**

A physical education department study evaluated what key skills staff wanted Year 9 students to attain by the end of Year 9. These were communication skills, collaborative skills, fair play/Olympic ideals, and fundamental physical skills. The department designed and implemented the use of a workbook with Year 9 students. As a team they wanted to evaluate current practice and use of the workbook. This resulted in a departmental action research cycle to revise the whole Year 9 physical education programme. Students were instructed to identify their own strengths and areas for development, to help them identify their uniqueness, thus drawing out their individual identities. The department looked at ways to embrace differences among students and use these positively for everyone's learning. Through the project they developed a Year 9 programme that moved away from a focus on teaching sports skills and performance, to teach social and collaborative skills through physical activities.

### **Case study 4: Unity and diversity with the Integrated Studies Syndicate**

The staff of the Integrated Studies Syndicate (ISS) identified a need to ease the transition of students coming from Year 8 into the Year 9 secondary environment. The three teachers in this syndicate considered that the students in their syndicate had a huge array of different needs ranging from extended pastoral care and social support to assistance with specific learning skills. They wanted to establish a calm and stable homeroom environment with set structures that incorporated behavioural routines. They also saw the need to review their current practices of teaching in order to refine, improve, and regulate the underlying learning processes.

Through this review, several initiatives have been put in place to raise academic achievement. These are: behaviour plans for each student and the development of an anger "toolbox" as strategies for students to use when appropriate, class programmes on rights and responsibilities in the wider historical and cultural contexts, and an introduction to the qualities of leadership. The philosophy of the staff in the ISS is to value students for what they bring, what they share, and who they are as a person. By developing and implementing these processes, the ISS staff considered that they now had a plan for responding to the multiple diversities that each student may bring to classes. The integrated studies syndicate refocused their overall philosophy to take account of the diverse needs of their students and revised and developed a new scheme. This focused on developing positive student-teacher relationships through teaching positive social skills and creating an atmosphere of respect within defined boundaries. Initial reflection on the new approaches indicates that students are engaging in more on-task behaviour and there is more mutual support amongst them.

### **Case studies 5 and 6: Diversity in a social studies classroom, and co-operative learning in drama**

Two teachers teaching the same class for social studies and English respectively developed a collaborative study on the use of co-operative learning within a Year 9 class to address the needs

of more able and GATE (gifted and talented education) students and extend them more. The teachers tracked the same five volunteer students in both social studies and English classes. For three weeks the students were asked to keep a journal in which they wrote down how they felt about their experiences in English and social studies. They were then interviewed, so that both teachers could evaluate the teaching approaches they had used. Both teachers learned about student preferences in working with peers. They found that their original assumptions about what made a difference to student learning (interruptions and who they worked with) were not as important to the students as they had expected. The teachers involved have presented separate reports that include their individual differences in understandings and in specific findings.

Each teacher has commented on how much more complex the concept of diversity has become for them. They still find value in focusing on a particular dimension that seems relevant to their situation, such as the ability of a student, or culture or gender, but they acknowledge that there are many interrelated dimensions and they are now more reluctant to be reductionist. They are also more aware that they need to base their ideas and beliefs about their students on evidence rather than just their initial perceptions. Their knowledge about each situation has been increased through carrying out their research projects. Previous studies have also indicated the importance of increasing teacher knowledge and awareness, especially when teachers have considered the implications of evidence of student achievement for their teaching (Symes & Timperley, 2003; Timperley & Wiseman, 2003).

The research process turned out to be more fluid than the teachers expected. Problems arose when they discovered that their questions were not specific enough, or that the students were not using the data-gathering tools (e.g., student journals) as much as they had hoped. Some of the findings surprised the teachers and enhanced their understandings about the complexity of their classroom dynamics and environments.

The findings indicate that teachers often have tacit assumptions and understandings that they bring into their work. The research inquiry process revealed more information about specific aspects of teaching and learning, which on reflection led the teachers to identify and modify their practices. They will continue to determine whether the changes they have made lead to changes in student outcomes. This project allowed the teachers to become more aware of the contextual and contingent nature of their decision making about their teaching.





## 4. Limitations of the project

Workload commitments of the teachers, particularly an Education Review Office (ERO) visit, report-writing and compliance with other school documentation has at times slowed progress. Much enthusiasm for the project was expressed by the staff at Linwood College and many staff volunteered to be involved. However, an ERO inspection early in 2005 took the attention of many staff, affecting the numbers of staff involved in the remaining projects and their starting dates. Consequently, the interview process with middle management was modified to take the pressure off the middle managers during the ERO visit. Teachers are very busy people and they have had to snatch small windows of opportunity to work on their projects. However, their findings are profound in relation to their personal and professional journeys and have altered the ways they perceive their practice.

This was a one-year project. It took several months of discussion to frame the teachers' ideas and what methods they would use. It must be remembered that the research process is a new way of operating for most teachers and, therefore, they needed time and support to develop their ideas.



## 5. Building capacity

### **The project team**

Dr Lindsey Conner, Christchurch College of Education, project leader.

Dr Janinka Greenwood, Christchurch College of Education.

Peter Buyers, Linwood College.

The participating practitioner partners.

### **Building capacity and capability**

The teachers involved in the pilot project are at present very tentative researchers, full of enthusiasm for the work and its possibilities, but still discovering the meaning of “evidence-based” theorisations and reliant on the researchers as mentors to guide their processes. Nonetheless, they have developed capability as practitioner researchers and have acquired a sound understanding of the processes and principles of action research and reflective practice. Their readings have given them a substantial body of conceptual knowledge. Their confidence in their own standing as practitioner researchers is gaining momentum and they are becoming more able to lead their colleagues in further research projects.

For each of the participants, the breakthroughs in understanding about aspects of teaching have been quite profound. We have been heartened by their willingness both to consider alternative ways of operating and to risk putting their practices in the limelight, to be creative and inventive and thereby make a difference to their teaching practices and student outcomes.

We, as mentors, are also developing our own understandings of the challenges of diversity in the contemporary classroom and of the range of strategies teachers may use to address that diversity. This is informing our own practice in pre-service teacher education.

As a result of this project, the school is continuing to build its own capacity for developing considered, grounded, and supported policies.

In addition, the teachers involved in the project are aware that they have developed their own capacity for being learner-centred in adapting their programmes to reflect responses from their students and themselves as learners.

Through this project the participating teachers have gained research skills that they would not have had the chance to acquire otherwise. As a result of this experience, they have also realised that investigating an issue and finding evidence can indeed highlight areas for change in practice and uncover areas that warrant further research. Some of the teachers who were involved in this project will be leading other teachers to investigate their own practices in 2006. However, time is required for mentoring and to make the research effective.

## **Dissemination**

A description of the project appeared in *The Colleague* (Stanbury, 2005), a quarterly newsletter published by the Christchurch College of Education that is distributed to every school in New Zealand. The project also featured on TV One's *Breakfast* show on 13 December, 2005.

A description of the project and its preliminary findings was presented at the 50th World Assembly of the International Council on Education for Teaching (ICET), which was held at the University of Pretoria, South Africa, on 12–15 July, 2005 (Greenwood & Conner, 2005).

More details of the individual projects were presented at the December 2005 conference of the New Zealand Association for Research in Education (Conner, Greenwood, & Buyers, 2005). Peter Buyers who co-ordinated the project within the school, was a co-presenter at the NZARE conference.

We are planning to write an article for publication in the *New Zealand Journal of Educational Studies*.

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# Appendix A: Case study 1

## **Diversity: What we say and what we do—aligning policy and practice**

Schools are a nurturing, foundation block of our society. A school's policy and its practices should reflect its commitment to its diversities as well as its unifying aims. However, striving for unity can end up marginalising diversity, and *vice versa*. The purpose of this study was to assess the processes for formally identifying, recognising, and addressing diversities in a methodical way school wide.

### **Research questions**

The research questions were:

1. Do the college policies show the college's:
  - intention to address student diversity
  - perceived subject provision
  - awareness of perceived relevance?
2. How does the college adapt to the needs of its students?
3. How will the college set future goals?

### **Methodology**

This study was in four stages.

1. Trawl of Linwood College policy statements to ascertain:
  - the extent to which the policy documents addressed diversity
  - the consistency of approach when addressing diversity types and their contextual setting.
2. Questionnaire 1 to heads of department (HoDs), which asked what HoDs perceived is the provision for diversity in their department. This was to ascertain non-context specific data that would reflect departmental practice. The questionnaire was voluntary.
3. Questionnaire 2 to HoDs (voluntary), asked what they perceived are relevant diversities to their subject areas. This was to establish the range of perceptions about diversity and whether this was reflected in *informal policy*.
4. An interview with volunteer HoDs to discuss the results of the questionnaires and the implications for their department.

### *Policy trawl*

This looked at school policy statements on curriculum development, special teaching needs, sports education, the Treaty of Waitangi, the Parent Teacher Association, and community consultation. Department policy statements were requested from individual heads of department. Selection was based upon words or phrases implying a consideration of diversity (e.g., range, flexibility, ethnicity, etc.). These key words/themes were documented and the quantitative outcomes were used to inform the direction of the next stage.

### *Questionnaire 1*

Questionnaire 1 was as open ended as possible and was produced through informal discussion with a number of staff. It was addressed to HoDs and asked:

- What provision do you believe you have in place within your departmental area to cater for and utilise diversity?
  1. Formal (documented within planning and policy)
  2. Informal (not documented).

The questionnaires were distributed by email. A word frequency count was employed to analyse the responses (Table 1). Word frequency counts (University of Salford, 2000) allow simple quantitative comparisons to be made.

### *Questionnaire 2*

Questionnaire 2 asked HoDs what they recognised as diversities within their departmental areas. Like Questionnaire 1, it was open ended and distributed by email. Responses were also analysed with a word frequency count (Table 2). There was a gap of five weeks between questionnaires 1 and 2, to allow for triangulation and minimise carry-over effects from answers to Questionnaire 1 (Cohen & Manion, 1997).

### *Interviews*

All HoDs were invited to take part in discussion of the data generated from the questionnaires. Two HoDs were available within the timeframe required by the study and were interviewed in a semistructured format (Cohen & Manion, 1997).

The aim of this part of the research was to develop a “working meaning” from the questionnaire frequency responses given in stage two, to generate further questions and the proposal of a list of “next actions” to be taken by the researcher, the departments (downfeed), and statements of implications to advise the Senior Management Team, the Board of Trustees, and HoDs (upfeed).

During the interviews, I outlined the aims of the whole project and summarised the individual projects being carried out throughout the college. I also wanted to check the results of the questionnaires with HoDs so they could consider what the actions would be taken next, at departmental and research levels. We also discussed the implications of the research for the college and college senior management.

## **Findings**

### *Review of policy trawl*

The college policy documentation reflected a general commitment to several diversities within the college—primarily culture, race, socioeconomic background, and educational needs, although social diversity, age, home backgrounds, and parental/guardian relations were also identified. While the policies articulated expressed a general intent to provide flexibility to meet the needs of diversity, there was no strategy to formally identify, record, and plan for diversity. Even though one of the objectives of this project was to find the strengths and goals of the existing policies, this was not possible due to the lack of context and bench marks.

The following questions were derived as a result of the policy trawl:

1. As a college, what diversities do we identify with?
2. What diversities do we commonly feel we plan for?
3. Are these the same diversities as those we believe to be relevant in our teaching?
4. How do we contextualise “relevance”?
5. How do we plan to construct and implement policy that places diversities in context settings?

The questionnaires addressed questions 1 to 3. The HoD interviews began the process of addressing questions 4 and 5.

### *Review of Questionnaire 1*

There were seven departmental responses to the questionnaire. Two other departments only provided copies of their policy documents, which were unsuitable for this study.

Table 1 **Types of diversities provided for in departments (HoD responses). N = 7**

<b>Types of diversity</b>	<b>Number of HoDs</b>
General subject ability	6
Māori	5
Learning styles	4
Pasifika	4
Interest	4
Other cultural groupings	3
Assessment	2
Cultural differences	2
Literacy level	2
Vocationalism	2
More able students	2
Goal setting	2
Gender	1
Curriculum/subsubjects	1
International languages	1
SEN	1
GATE	1

### *Review of Questionnaire 2*

There were six departmental responses appropriate for analysis. General subject ability was mentioned most frequently. The next most commonly identified diversity factors were: background, individual needs, attitude, previous school/educational experience, knowledge level, age/year group, gender, assessment, cultural differences, and learning styles. Lowest responses covered: values, religious beliefs, individual understandings/cognitions, school improvement needs, planning, teaching style/strategy, choice/variable outcomes, inclusion, relationships, skill types, international languages, European, Pasifika, Māori, and interest level.

Table 2 **Types of diversities indicated as relevant to individual departments (HoD responses). N = 6**

Type of diversity	Number of HoDs
General subject ability	3
Backgrounds	2
Identifying individual needs	2
Attitude	2
Previous school/educational experience	2
Skill level	2
Knowledge level	2
Economic background	2
Age/year group	2
Gender	2
Curriculum/subsubjects	2
Assessment	2
Cultural differences	2
Literacy level	2
Vocationism	2
More able students	2
Learning styles	2
Values	1
Religious beliefs	1
Individual understandings/cognitions	1
School improvement needs	1
Planning	1
Teaching style/strategy	1
Choice/variable outcomes	1
Inclusion	1
Relationships	1
European	1
Skill types	1
International languages	1
Other cultural groupings	1
Pasifika	1
Interest	1
Māori	1

### *Comparison of questionnaire data*

The data from the six respondents to Questionnaire 2 were compared with their corresponding responses in Questionnaire 1.

HoDs indicated that the type of diversity that was provided for and that was most relevant for their departments was general subject ability. Fewer HoDs saw it as relevant than wanted to have provision for it. However, a much greater number of “related” categories were recognised in Questionnaire 2, such as: individuals’ understanding and cognitions, identification of individual needs, choice/variable outcomes, skill types, skill levels, knowledge levels, and previous school/educational experience.

When asked about how their department provided for diversity, the highest responses were for Māori, Pasifika, and “other cultural” groupings. However, all three were seen as having little relevance to subject. The latter was quite a surprising finding.

GATE, SEN, and more able students received very low recognition for either provision or relevance (Table 1 and Table 2). However, some of this may be accounted for in the increase in the “identifying individual needs” category, which scored higher for relevance than it did for provision.

The data reflected a change in awareness of diversity in the time between the questionnaires. The comparisons outlined above raised further issues such as:

- What is the significance, if any of the mismatch between the perceived provision and relevance of Māori and Pasifika considerations?
- What does “general subject ability” mean?
- Should policies adapt to address our practices, or our practices adapt to meet our policies ... or both?
- How do we standardise our perceptions of diversity, yet still maintain the integrity and complexities of our diversities?

### *Interviews with HoDs*

The categorisation of the types of diversity was created by the researcher. Some HoDs may not have understood what could be included in these categories. Therefore, the categorisation of the questionnaire responses limited the way both questionnaires could be compared.

In two of the interviews with HoDs, we discussed the apparent discrepancy between our provision for Māori and Pasifika issues and our perception of their relevance. We agreed that the discrepancy reflected the framing of Questionnaire 2, which by its open style implied academic relevance only. Provision for these and other groupings could exist as part of our social responsibilities in education, independently of perception of their relevance to academic outcome. This is in line with the Ministry of Education’s definition of “Purpose for Education” (2005, p. 5).

## **Implications and next steps**

We agreed to follow up the initial research in order to refine the responses, at both departmental and whole-college levels in 2006. The data generated will allow departments to plan for diversity in a more strategic manner.

Any next step on a whole-school level must consider a review of strategic planning and policy-writing procedures. A future audit of diversities and their subsequent reclassification through departments could provide a working context to then apply to the policy statements. For this to happen, strategic planning about how to respond to and celebrate diversity needs to be developed.

## **Conclusion**

Linwood College has many diversities among its students, some more apparent than others. The college's policy documents and the provision made in departments reflect this. HoDs indicated that the awareness of context relevance was not always apparent. However the systems for assessing "appropriateness" appear to be subjective and non-systematic—diversities are catered for where it is considered appropriate to do so.

Generally, the college policy statements provide good coverage of issues regarding diversity, primarily culture, race, socioeconomic backgrounds, and educational needs. Social, home background, and parental/guardian relations are also identified. However, policy statements lack the contextual relevance required to address a consistent coverage of the Ministry of Education's "Purpose for Education".

How departments will address a range of diversities in contextual settings such as academic, social, and others is an area that needs attention.





## Appendix B: Case study 2

### **Addressing diversity in science through schemes and teaching approaches**

#### **Aims**

The aim of this study was to research how we plan schemes and teaching approaches to address diversity. First, we considered the diversities that the teachers faced within the classroom. Second, we wanted to evaluate how the Science Road Map scheme of work developed by the department allowed its staff to plan for their diverse students. We hoped that this study would identify the diversities and allow us to develop the schemes of work more efficiently.

#### **Background**

The Road Map is an electronic copy of the science schemes of work on Excel spreadsheet (an excerpt is given in Table 5). It was first developed by a teacher from the United Kingdom as a planning tool to structure his lessons in relation to the New Zealand curriculum. It was later embraced by the whole department as a useful tool to share common literacy strategies and address the different levels of literacy within our classes. It has since developed to include the activities for gifted and talented students (GATE), resources, objectives, pedagogies, levels, practical work, cultural connections, numeracy, Internet and communication technology, and homework. The purpose of the Road Map is to provide an overview of the intention of the topics and to provide staff with an active, growing, evolving scheme of work. As a consequence of professional development for staff over the previous year focused on numeracy, literacy, and GATE, the Road Map was extended to incorporate these topics and address the diverse needs of our students.

#### **Methodology**

The focus of this study was to determine science teachers' perspectives of the diversities they faced as well as how effective the Science Road Map was in aiding them to prepare for these. This project is establishing a baseline of how teachers are planning to address diversity in their teaching. This process was expected to help adapt and improve the Road Map structure. A questionnaire was filled out by four part-time<sup>1</sup> and five full-time science teachers. The questions were:

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<sup>1</sup> Part-time staff refers to staff members who do not teach a full load of science classes (i.e., teach in another department or have other duties that mean they teach less than four science classes).

1. What do you consider diversity to be?
2. What diversity do you face in the classroom?
3. Rank the diversities you listed in question 2 in order of most difficult to deal with.
4. Which diversities do you feel are the most important in your class room?
5. Do you use the Road Map? How often?
6. How does the Road Map help cater for your diverse class?
7. In what ways does the Road Map help/not help you prepare for your classes?
8. Has the Road Map made you more aware of the diversities you face?

The answers to each question were collated and categorised into tables (Tables 3 and 4). Staff were given feedback on the analysis and asked to comment at a staff meeting on these. In addition, further comments relating to the development of the Road Map and resources catering to diversities were noted during departmental meetings.

## Findings

Nine science teachers completed the questionnaire. We found that staff members identified a wide range of diversities (see Table 3). Diversity appeared to cover different aspects, the general consensus being that it was: “the differences between students in our classes” and included such things as: culture, learning styles, gender, ability, skills, and personality.

Table 3 **Summary of the top three diversities identified by science teachers**

Top three types of diversities	No. of teachers
Ethnic/cultural differences	7
Ability	7
Learning styles	6
Economic advantages/disadvantages	4
Gender	4
Social skills	3
Literacy	2
Age	2
World views	2
Interests	2
Motivation	2

The science teachers were also asked to rank which diversities they found most difficult to deal with and which ones they considered to be most important. The top three diversities named by each staff member were analysed. The results are summarised in Table 4.

Table 4 Diversities as ranked by teachers, in descending order

Most difficult diversities to deal with	Most important diversities in terms of relevance
Ability	Social skills, behaviour
Ethnic, cultural	Ethnic, cultural, ability
Social skills	Literacy, numeracy, gender, learning styles, educational readiness, interests, motivation
Literacy, numeracy, learning styles, gender, world views, educational readiness, motivation	

The questionnaire also asked staff how the Road Map helped them to address the diversities of their students. It was found that all teachers used the Road Map at least three times a week either to get an overall approach to the topic or a feel for how to plan their lessons at the ability level at which the students are working. Staff also found it useful as a source of different teaching strategies and up-to-date resources that could easily be modified to suit the abilities within their class:

The Road Map is a source of up-to-date resources of a variety of ability levels and strategies. [Teacher]

The latter helps to keep the socially limited students engaged in learning. [Teacher]

The questionnaire responses also allowed us to consider how the Road Map helped teachers prepare for their lessons. The most common response was that resources and activities were readily accessible. For example, the Road Map provided worksheets that were at different levels or could be easily modified to suit a different level:

Readily available shared resources and the instructions to go with them save planning time, and allow more attention to be put into them to make them appropriate to the class or individual students. [Teacher]

At a science department staff meeting, a labelling system was developed so that the level of literacy required for a worksheet could be easily identified. The size of the groups needed for activities was also identified as a key factor. This was especially important for any co-operative learning activity. Other points about the Road Map that aided preparation were: quick access, homework sheets, good content coverage, good curriculum outline, strategies outlined, extension activities, a range of starters at different levels, and easily adaptable resources.

Helps me find activities, especially good for resources. [Teacher]

It helps me prepare by giving me a generic unit plan that I can then adapt if I need to. It also has the main experiments to complete and acts as a guide. [Teacher]

Many areas of the Road Map still need developing. Teachers indicated that they wanted:

- more resources and activities (especially those including cultural aspects)
- delivery philosophies (pedagogies) to support the activities, added by teachers with specialist knowledge of the topic
- more clarity to objectives (i.e., made more specific)
- more content (e.g., experiments).

In the second questionnaire, staff were asked to comment on the importance of these areas of development for the Road Map. The order of the five responses was very mixed. Most agreed that the Road Map needed more resources and activities. This was also evident from department meetings, where electronic folders were added for GATE, homework, starter activities, and literacy activities. It is planned to add these resources as staff develop them over time with appropriate contexts. Some staff also identified aspects of the way they taught and culturally relevant activities as quite important.

Other areas of development or issues that were identified from the follow up questionnaire were:

- the importance of user friendliness (i.e., in opening and printing resources)
- copyright of activities and the Road Map
- identifying on the Road Map how the various activities address the types of diversity.

## **Conclusion**

The project showed that the Road Map is an excellent resource to aid teachers in planning lessons that cater for a large range of diverse needs. The easily accessible resources make planning lessons easier and allow for more time to be spent on adapting them efficiently to suit multiple needs of students. The Road Map has made the sharing of resources between staff much more efficient, which has also led to a sharing of ideas about how to teach a topic. This discussion has been mainly verbal and is yet to be developed fully on the Road Map.

A push from the Ministry of Education (2002; Working Party on Gifted Education, 2001) on catering for GATE students has meant that this area has also been developed on the Road Map. This is expected to develop further as staff gain professional development on GATE students and feel more able to develop resources to suit these students. At the time of writing this report, this area is being targeted in two ways:

- individual activities that able students can work on independently
- group activities that can be used with a whole class.

Another area discussed in department meetings has been to develop “generic templates” of activities—a description of an activity, together with an example which can be adapted for any topic. This development has started across some topics and will continue as staff put on more resources.

Some areas of concern that have stemmed from this research are:

- copyright obligations for resources that could be taken by staff to other schools
- the loss of resources due to system failure (somewhat abated by constant backups)
- loss of the links to resources when alterations are made causing file pathways to be lost.  
This will be solved as a more definite system for categorising resources is developed.

There is scope for the department to consider how it might embrace the idea of multiple diversities. It has started to address some aspects of diversity through the identification of aspects of motivation and the appropriate group size for activities. The Road Map is an excellent tool that will in time develop to allow all science staff to plan for ways to address multiple aspects of diversity.

Table 5 Section of the Science Road Map

Item title	<a href="#">National Curriculum Level</a>	Foundation	Intermediate	Higher ability	Lesson objectives	Pedagogies	Activity	Resources	<a href="#">Literacy</a>
Topic starter		*	*	*	To gauge class prior knowledge. To instil interest in topic.		Post-box or students draw their favourite animal and see if others can guess what they have drawn.	<a href="#">Post-box</a>	
Defining an animal		*	*	*	To revise MRS GREN. To distinguish animal features.		<a href="#">Issue front page for unit. Revise MRS GREN: Could do this as a group task to list common features of all animals, or to define "animal". Text page 27.</a>	Text: 3 Science book one, chapters 2 & 5.	See RTLB for excellent early reader booklets, Skill Seekers' series, "Amazing Animals".
Classification of animals	LW 4.1		*	*	To revise the taxonomic system with reference to at least 3 categories: kingdom, genus, species. To recognise scientific names of animals.		Classification revision: organisation into kingdoms, phyla, genera, species. Using a key.	Refer to Blooming Good unit for classification resources. Animal classification cut and paste. 3 animal ID task. Insect key (class set available from Sc) & Hwk Starter— animals 2 & 3 .	Teach higher classes singular and plural forms of the classification categories: phylum/phyla, genus/genera, species/species.
The place of animals in living systems	LW 2.1 3.1 4.1	*	*	*	To construct and interpret community trophic levels, food chains, food webs.		Living things depend upon each other for survival—food chains, food webs, trophic levels.		New vocabulary: autotroph, heterotroph, herbivore, carnivore, omnivore, parasite, saprophyte, grazer.
Adaptations of animals	LW 3.2 5.2	*	*	*	To define and give examples of animal adaptations. To explain how adaptations aid survival.		Notes on types of adaptations with examples. Text readings.	<a href="#">OHT notes—adaptations.</a>	New vocabulary: nocturnal, diurnal, structural, behavioural, physiological, camouflage, mimicry.

## Appendix C: Case study 3

### Responding to diversity in physical education

Catering for the diverse learning needs of our students in physical education lessons was a key focus for our department in 2005. This action-research project examined how the physical education department responded to the diverse learning needs and cultural backgrounds of students.

We began the process by asking what were the needs of our Year 9 students. In particular:

- What skills should students have by the end of the year?
- What are the best ways to develop these skills within physical education?
- How can we meet their needs?

The skills we chose as most important and way we decided to teach them are presented below.

Table 6 Targeted skills and associated planned activities for addressing these

Skill	Activity	When taught
Communication skills	Adventure-based learning, small balls	Term 1
Collaborative skills	Movement, large balls	Term 2
Fair play/Olympic Ideals	Team sport, mini Olympics	Term 3
Fundamental physical skills	Athletics, touch rugby	Term 4

The action-research project involved a thorough reflection on our current practice through meetings and discussions and resulted in a team effort to reorganise our Year 9 programme and workbook.

### Methodology

Our work to address diversity in physical education was based on the Carr and Kemmis action research cycle that is described by Bruce-Ferguson (2003). The methodology involved a cycle of initial reflection on practice, planning, action to improve, followed by observation. In his presentation of the five main stages in the skill development of physical education teachers, Siedentop (1991) highlights the importance of constant reflection on professional practice and expertise in order to become an effective physical education teacher. The action research cycle provided a logical methodology for improving professional practice and addressing the diverse needs of our students. We, as a department, anticipate that this will be an ongoing process in the future. The diagram below shows our first cycle of action research. The action research described here led to the planning of an Olympism unit of work.



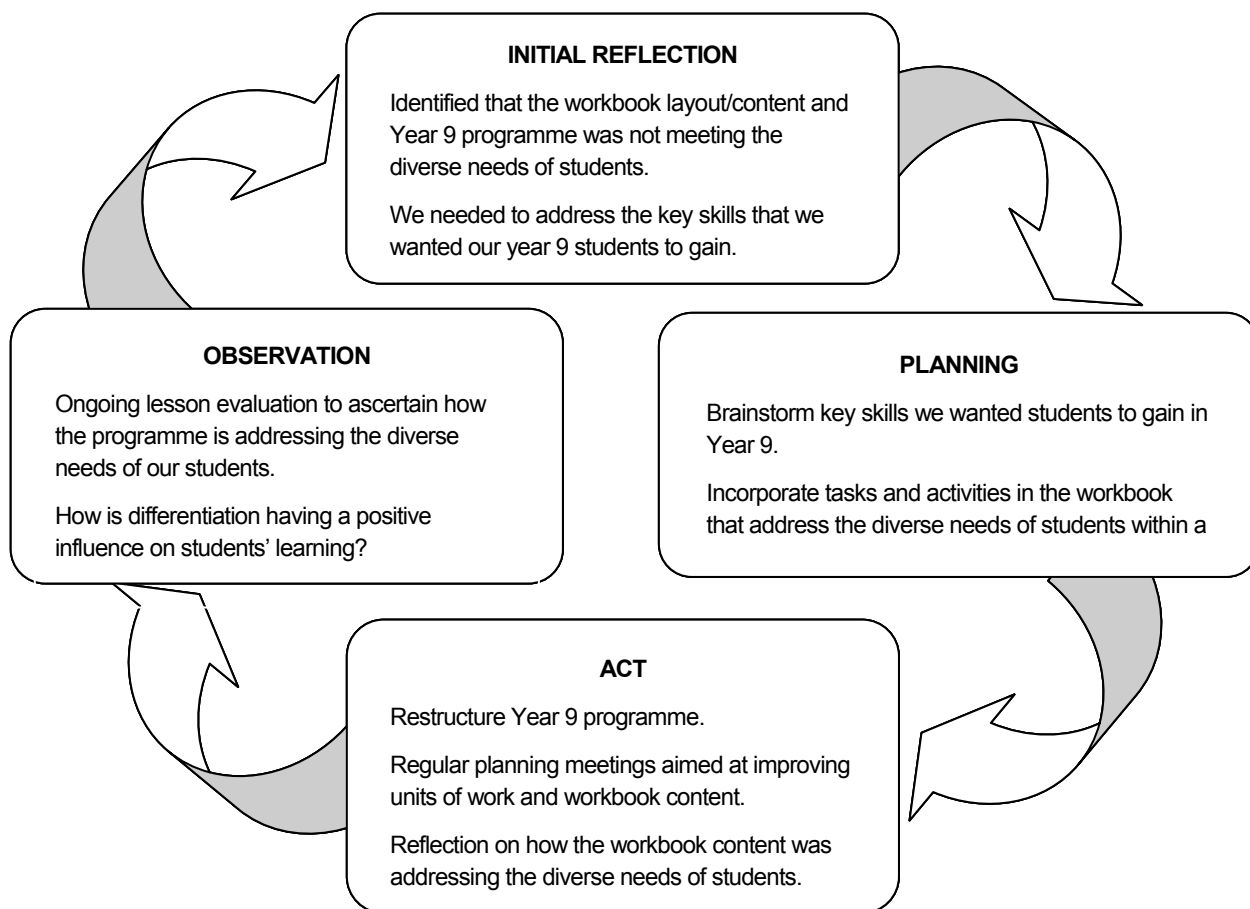


Figure 1 **Cycle of action research**

In the planning and action stages, each staff member worked independently on workbook and resource content, reporting back in departmental meetings. The focus was on ensuring our programme catered to the diverse needs of our students.

***Definition of diversity***

Before addressing our Year 9 programme, we discussed, as a department, what the key issues were for us in addressing diversity in our subject. We all had a broad definition of the meaning of diversity in the classroom. Zepke (2003) discusses how “diversity goes far beyond ethnic culture. It also includes gender, socio-economic class, age, sexual orientation and disability amongst others” (p. 90). Linwood College students have differing backgrounds and ranges of experiences that are unique and potentially enriching to the learning for all.

***Students’ understanding of their own needs and diversities***

At the start of the year, students completed a personal profile in their workbooks that was used to increase and help to build their awareness of their own unique differences. It also gave teachers an insight into how students were thinking about themselves and contributed to the relationships that

teachers built with the students. Building relationships and getting to know students is an essential component of inclusive teaching (Zepke, 2003). Thinking about what each individual has to offer, rather than the baggage they sometimes bring with them, is key to unlocking their potential. By getting the students themselves to identify their strengths and areas for development, we are helping them to become more aware of their own needs.

### *Students' understanding of others' diversity*

Within our Year 9 programme we have placed great emphasis on students developing their own understanding of diversity. The idea that we all bring different strengths to a certain lesson and that by working collaboratively we will achieve more, is a central aim of our Year 9 programme. This is the basis for planning in the Olympism unit.

### *Diversity in levels of ability*

A central underlying concept of the Health and Physical Education curriculum is the socioecological perspective which encourages students to take account of considerations that affect society as a whole, as well as an empathy for individual circumstance, and discover the need to integrate these. Central to this concept is “physical education is for all” and that being “physically educated” is about developing key knowledge, attitudes and values, skills, and understanding, and not simply just about being physically able. It is always pleasing to see students with intellectual disabilities from the Linwood College endeavour unit catered for with this central concept in mind, by being included in mainstream physical education classes with carer support.

A key focus in our planning has been catering for all levels of ability within classes. Adopting less direct teaching approaches and developing student-centered learning has been a central part of our work. We have now incorporated co-operative learning for both practical and workbook tasks along with differentiated learning experiences between and within classes by allocating roles to students for group work and giving them responsibilities within groups. We consider that physical education has inherent advantages when it comes to teaching social skills and collaboration to achieve a common goal. It is hoped that our explicit teaching in this area will make it easier for every department at the school to incorporate co-operative learning activities into their learning programmes.

### *Student voice*

Part of our action on addressing diversity within classes has involved informal discussions with students to ascertain whether the Year 9 programme and workbook has catered for their needs and learning styles. Evaluating our revamped programme using student feedback within lesson time more formally using student questionnaires], is an area to target next year when we observe and reflect on the effectiveness of our programme changes.

## **Outcomes of the action cycle**

As a result of our reflection on what we do and what we needed to do next to address diversity more directly, we collaboratively developed a unit of work on Olympism. In this unit, an awareness of diversity will be facilitated through students participating in a range of activities and celebrating the diversity of the class in a mini Olympics run in accordance with the Olympic ideal. Students will be encouraged to “investigate and experience ways in which people’s physical competence and participation are influenced by social and cultural factors” (Ministry of Education, 1999, p. 23).

A number of the practical activities in the Olympism unit will involve the students in designing games and events that will be used in a mini Olympics towards the end of the unit. Many of the Olympic ideals highlighted below are central in addressing diversity within a class.

## **Conclusion**

In this project the action research approach was used to develop more effective teaching and learning unit of work (programmes) with a specific focus on addressing diversity. Our school vision is based on “providing learning pathways to the future”. “Celebrating differences” is stated as a key goal in our school charter.

We have found that by using the action-research methodology discussed by Bruce-Ferguson (2003), we have been able to critically reflect on our Year 9 programme and workbook. As a result we are moving away from a focus on teaching sports skills and performance to a focus on teaching social and collaborative skills through physical activities. While practical skill development is still a major part of the programme, we have reorganised our teaching to incorporate skills more holistically. Developing socially responsible students who have a broad appreciation of difference within a class has been a targeted byproduct.

Central to the planning involved in this process has been reflecting on our current practice, with a view to improving it. Becoming a “reflective practitioner” is an important step in becoming an effective physical education teacher, according to Mawer (1995). Over the coming years the Linwood College physical education department will be continuing to develop further spirals of action research to improve the way in which it caters for the diverse needs of its students.

# Appendix D: Case study 4

## Unity and diversity within the Integrated Studies Syndicate

### Background

The Integrated Studies Syndicate (ISS) is a group of four primary-trained teachers who provide a home-room approach for low-ability and special needs Year 9 students, to ease their transition into the secondary environment. The students have a range of abilities, but all are within levels 1–3 of the curriculum, which equates to Years 1–6 of the New Zealand Curriculum Framework. Some of the students enter with a reading age as low as 6 years (in one case, at the pre-reader, word recognition stage), while their chronological age is 12–14 years.

The ISS works with students who are the most diverse in the school, and with the greatest learning needs. Students arrive with a mixture of learning, emotional, and (at times) physical needs. They also often have high dependency, established attention-seeking behaviours, and truancy issues. The syndicate caters for a high proportion of Group Special Education clients who fall within the top one percent of identified extreme behavioural needs (issues include foetal alcohol and drug syndrome, sex offending, oppositional defiance disorder, attention deficit disorder, attention deficit hyperactivity disorder, and truancy).

At the start of each year, students undergo a wide battery of tests to identify specific needs or areas of weakness to be addressed. This includes ASTTLE reading and writing tests, the Burt, Vernon, Probe, and PAT listening tests. Data from these tests are used by the ISS teachers to provide a programme of study that meets individual students' needs. Candidates with specific learning difficulties are identified through these tests for the Toe-by-Toe Programme (Cowling & Cowling, 1993). Most tests are repeated in Term 4 to gauge growth and for reporting to parents. These data are also used to aid in class placement and forward planning for Years 10 and 11.

The ISS caters for students in both Year 9 and Year 10. It allows students to continue the homeroom situation and receive greater support within their learning environment.

ISS staff approach the students in a very different manner from most secondary-trained teachers, focusing on relationships. Students entering Year 9 are generally expected to be able to work formally and informally in individual, paired, and co-operative groupings. Interestingly, students in the primary sector tend to just do this, with minimal training or direction from teachers. However, students often need to develop or be retaught these skills within the secondary environment. Why do students forget or lose these skills between primary and secondary school? Could this be an age-related deficit? Is it the change in their environment, or are they reverting back to a previous egocentric stage? These are important questions to investigate, but are outside our current research.

The syndicate teaching role is based on the creation of routines and set expectations, all the while developing positive and open relationships.

### **Definition of diversity**

We defined diversity in education as: “Having many diverse parts, requiring collaboration between teachers, students, and colleagues to be connected”. It cannot be seen in isolation, as all students are unique in mind and thought, abilities, strengths, and weaknesses. Therefore, it is a complex system of very different parts, all connected to the learning guide (the teacher), whose function is to encourage students to achieve to the best of their ability. The staff in the ISS believe that addressing diversity is an ongoing and dynamic process.

### **Research question**

Our research question was:

- How do we best address the diverse needs of our students?

### **Method**

In Term 2 of 2004, we decided to examine our current practice. The syndicate teachers collaboratively discussed and analysed what we were doing and how this affected our students in terms of positive engagement in learning activities. As a result, teachers worked closely to prepare and develop an integrated class programme.

One of our biggest problems in teaching was the students’ lack of social skills. These were also the hardest for the students to learn. After much deliberation and changes in our approaches to our teaching and choosing more relevant content, the problems still existed. We concluded that in order for students to learn we needed to ignore the Year 9 academic curriculum and focus on developing social skills, which technically fitted into both the health and social studies curricula. Adding the required English components was straightforward, as we integrated material from the social skills programme we developed.

In designing a workable unit, we adapted the social skills programme currently in use in New Zealand primary schools.

Teachers started by asking their students about themselves, their hopes and ambitions, and how they wanted to be treated. Next, teachers identified their expectations for behaviour in the class, and the consequences of both good and bad behaviour. This enabled the students to see that, although they have the right to be educated, this also meant they had responsibilities. They were asked to identify these responsibilities and rate them in importance, both as an individual and from the point of view of the class as a whole. This gave students ownership of what they believed was acceptable and unacceptable performance. Interestingly, this reinforced for us how important ownership is in student performance. When students had input into how they would like to be treated, they felt acknowledgement of their needs.

We then asked the students to identify the qualities they most valued from their friendships, and to give reasons for this. We wanted them to reflect on the behaviours they would like and hopefully transfer this to how they should behave. Then we developed a collaborative class contract. This activity required students to evaluate their choices and decisions on a daily basis, particularly in the lessons following morning break or lunch times. “Stop, think. Is this a good choice?” We encouraged students to discuss and evaluate previous choices. Students were continually prompted to reflect on their agreed class contract and their behaviour in relation to it. In 2005, we revised the contract with input from the students.

Students were asked to rate their behaviours against three specific responsibilities:

1. to respect others’ right to learn without interruption
2. to be thoughtful, co-operative, and tolerant
3. to apply their best possible efforts at all times.

This simplified contract ensured that the students were able to easily evaluate their actions within the classroom environment. Students went on to develop behaviour plans specific to each homeroom, including their preferred reward systems. Each student was able to put forward their views and ideas, which allowed them to feel at ease and take ownership of the process and outcomes. Because all students had to be involved in the decision making, all were catered for, which effectively meant that each individual’s needs were met while the diversity of the students as a group was respected. They each also were expected to take responsibility for their future behaviours and actions.

The next part of our action process was to teach students how to deal with a problem. This was the first step towards students understanding the stages necessary in conflict resolution. Students needed to recognise the emotional and physical triggers for anger and their reaction to it. Staff collaboratively developed a range of activities that became an “anger toolbox” that gave students ways to process their anger and calm down. This led on to strategies for negotiation and problem resolution. Class programmes for Year 9 then moved on to looking at rights and responsibilities in wider cultural and historical contexts, focusing predominantly on the treatment of children throughout history to the present day.

## **Findings**

While working with the students ideas to derive the class contracts and reflecting on how individuals were coping, we realised that the students in fact had multiple diversities and that teachers needed to find ways of unifying the environment to cater for and include all students. The diversity was such that students were ill-equipped to cope with the normal school day, issues that arose, and one another. Teachers met the needs of individuals through reminding them of the class contract and giving them steps for how to tackle their work as well as modelling acceptable behaviours. In this way the teachers created a tolerant or safe environment through the teaching of social skills. Students learned to deal with problems without resorting to abusive or violent behaviours. As students learned to use these skills, they were better able to work within co-

operative groupings, made fewer put downs, and showed less off-task behaviours. They also became more involved in the learning process, more frequently offering suggestions and completing set tasks.

Through systematic reflection on our teaching programme, we have reorganised and rewritten our strategic plan or framework to accommodate the needs and values that the students bring when they enter Linwood College. We use multiple groupings, that is, students are grouped differently according to the type of focus of the activity in order to bring out their individuality and diversity in a safe environment.

Relationship building between staff and students is crucial in order to create an environment of respect within defined boundaries. This study achieved this through the teaching and development of positive social skills in students.

### **Conclusion: the way forward**

For the ISS, the way forward involves the continuing evolution of a working document—our integrated class programme—that condenses the broad diversities of individuals into a more manageable plan, without losing sight of the personal identities of students within the ISS. This is one of the successes of the ISS programme—students are valued for what they bring and share, and for who they are. A core fundamental of the ISS is developing positive relationships. This underpins the complete programme and is the heart of the ISS' success. Teachers model positive relationships daily, both as co-workers and friends, so that students can understand how to treat one another. Teachers take a keen interest in their students' holistic development. For the students, effective learning comes through relationships that are based on mutual respect, trust, laughter and enjoyment, and the belief that they are valued.

The project created new questions, to which we are seeking answers. We need more information about the social skills development within the primary schools that contribute to Linwood College. We also need ways to formally document changes in student behaviours.

Development of social skills fits ideally within the New Zealand curriculum's proposed key competencies, especially those of relating to others, managing self, and participating and contributing. These relate best to the original project, which focused on introducing social skills prior to academic learning.

We decided that the proposed key competences of thinking and using languages, symbols and texts should be further introduced in a more clearly structured manner. Classroom observations indicated that students need to practise forming questions and activities that require them to consider the implications of their answers. It has been noted that the skill of forming comparative, analytical, evaluative questions underpin enquiry learning. Reciprocal teaching, where the students ask each other questions, can aid in this development. In 2006, the ISS teachers intend to include paired writing within the programme so that students learn to write expressively and edit

work with a partner. Planning will continue on developing rubrics and how to use them with students.

In light of Garry's (2005) article "Keys to Competence" we intend to broaden the focus from the social skills to the five key competencies, which include thinking and literacy skills. Staff will teach to the key competencies to help prepare students for curricula they will meet further on in their education, but with flexibility of presentation in line with their needs.





# Appendix E: Case study 5

## **Look and listen before you leap: diversity in a social studies classroom**

### **The aim of the research**

The aim of this investigation was to reveal and analyse the responses of a largely self-selected group of above-average students at Linwood College to a range of different teaching strategies by employing a qualitative research paradigm. The primary research question was:

- “How do able students respond to working in groups?”

### **What are GATE students?**

It is necessary at the outset to establish what is meant by GATE students in the Linwood College setting. The Ministry of Education (2000) document *Gifted and Talented Students—Meeting their Needs in New Zealand Schools* has underpinned the GATE initiatives taken at Linwood. The document recommends the use of a broad definition of such students that includes personal qualities and high performance in areas outside of the classroom. In identifying GATE students based on their classroom characteristics, the college employed the GATE model, which incorporates factors relating to intelligence (including potential) as well as performance.

The focus of this research was the response of GATE students to group-based learning. A review of the literature suggested that such students could find group situations uncomfortable (Gillies, 2002; Gross, MacLeod, & Pretorius, 2003; Mills & Durden, 1992; Ramsay & Richards, 1997; Vaughan, 2002). There is evidence to suggest that giving GATE students’ choice over group composition is particularly important in ensuring that they can work successfully in a group situation (Clark, 1992).

The use of co-operative learning strategies involving groups based on random selection, with teacher-allocated roles, takes away this element of choice and can affect GATE students’ attitudes to group-based work. In such an environment, where all students are treated the same, the academic progress of gifted students is arbitrarily limited (Gallagher & Gallagher, 1994; Robinson, 1991).

The Working Party on Gifted Education (2001) noted that content self-selection based on student interest and strengths was significant in meeting GATE student needs. Their summary indicates that classroom processes for GATE students should be independent and self directed, creative with the chance to problem find and problem solve and open ended (Working Party on Gifted Education, 2001, p. 16). One of the qualities effective teachers of gifted students need is to be able to act as a “facilitator rather than a director of learning” (Department for Education and Children’s Services, 1996, p. 51). By implication, such a teacher empowers students by giving them greater

control over their own learning—a component of which is a freedom to choose (Conner, 2004). For maximum motivation and development, GATE students should be able to self select the content and the product of a course of study (Riley, Bevan-Brown, Bicknell, Carroll-Lind, & Kearney, 2004).

For the purposes of this project, I planed a range of types of activities to ensure that students encountered a range of different types of learning experiences. Such an approach has been indicated as being important in catering for diversity amongst students (Zepeke, Nugent, & Leach, 2003).

## **Methodology**

The research focused on ten students in the same form class in both English and social studies contexts. As the social studies teacher, I worked collaboratively with the English teacher and used a qualitative research model that also included my personal reflections. The approach within each subject was different, producing two sets of research findings.

Ten Year 9 students were invited and participated in this study. The group was of mixed ethnicity and capability, and balanced gender.

The project took place over one month. During this time, students were asked to keep a learning journal in which to record their daily comments on what occurred in their English and social studies classes.

As researcher and teacher, I also kept a reflective journal of comments relating to the problems encountered during the research and my views on how the class responded to the three teaching strategies employed. These were:

- teacher-directed learning centring on discussion followed by individual work
- co-operative learning in randomly selected groups with differentiated roles<sup>2</sup>
- choice-based activities in which students could decide whether to work alone or with others, and they could also choose what outcome they would produce.

The students were interviewed at the end of the observation period. The social studies interviews were conducted in teacher-selected pairs based on availability and compatibility criteria, except where students had worked together as part of the same group during the classroom phase of the research. It was felt that to interview students with the group members with which they worked, might have stifled honest comment.

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<sup>2</sup> The randomly selected groups were both teacher selected and student selected and differed in each class. The social studies class used both.

### *Problems encountered*

Four problems affected the data gathering:

1. *The nature of the research group itself.* In the course of the study it became apparent that the student sample contained only three students who could be positively identified as having marked GATE characteristics. The rest were “above average”, based on their entrance ASTTLE English and mathematics scores. The fact that the student focus group was by its nature diverse but not, in the main, GATE students raised questions about the relevance of GATE-based research findings to the group. There was a valuable lesson here for me: before a research plan or proposal is defined, check out the terms that are used and ensure that they are relevant for the group and for the project being undertaken.
2. *The large number of interruptions to the programme.* The students in the sample are multitalented. They were involved in a wide range of school activities that often took them out of class during the research. Given the group-based nature of much of the work that was being done, this was a major frustration for other group members—a fact that students commented on both in their journals and in the interviews. The number of interruptions made me aware of the need to ensure plenty of time for the research process, so that the project itself is not compromised.
3. *The learning journals.* Only one student maintained a daily journal of reflections. Most students made comments weekly. Despite the written guidelines they were given to assist them in their reflections, the comments tended to relate to the nature of the work done and the amount achieved, rather than their feelings about the strategies being used. The fact that a group of above-average ability was unable to make the kind of comments I expected seems to indicate that the research tool I selected was perhaps inappropriate. The journals did, however, provide a focus for the students and a useful reference point in the interviews with which the data-gathering phase concluded.
4. *The interviews.* These provided the most valuable source of data for this research, yet the way they were structured is the aspect of the research with which I am least comfortable. I am concerned that by interviewing the students in pairs the comments of one may have influenced the comments of the other, thereby undermining the validity of some of the data gathered. If interviewing was to be a significant part of a future piece of research, I would include interviewing strategies into the literature search.

### **Findings**

Students told me in the interviews that they favoured group-based learning activities strongly over individual work, with one important proviso: they wanted to choose the groups in which they worked when longer, high-stakes learning linked with assessment was involved. Indeed, the most important unexpected finding of the research was the importance such students placed on choice in promoting motivation and enjoyment. For them, it was the most valued factor among the

teaching strategies employed during the research. Also, personal issues could significantly affect students' enjoyment of the content being studied.

### *Impact of personal issues on student enjoyment*

The major social studies topic that was the focus for the research was a unit on refugees. Most of the students found the study interesting and preferred it to the New Zealand-based studies with which the year began.

One student, however, found the refugee theme difficult. The major reason for her discomfort was personal—her grandmother had a long-standing involvement in helping refugees in Africa. Unfortunately, her grandmother was very unwell, and studying refugees brought her grandmother to the forefront of her mind many times. My journal notes indicated that the student exhibited uncharacteristic off-task, disengaged behaviour on two occasions, and that I had talked with her about the situation. The student expressed her discomfort, but noted that the topic being studied did interest her. She brought along a video, some letters, and some photos of the refugees in Africa that her grandmother had helped over the years. When interviewed, the student noted:

I found it hard.... like if Nana and I hadn't helped refugees, I would probably have found it very interesting. Seeing it just reminds me of when she was well and stuff. [Student]

It is commonly accepted that graphic video footage with an apparently accessible commentary is a very powerful learning tool. Most students in the research group certainly found the video a very useful resource in their individual or group-based work. The responses of the GATE students in the research group indicated the need for teachers to be flexible and understanding when using a video as primary resource for a major piece of work. One of these students noted in her journal that she and her partner had accessed the material they needed, and that watching the video was "wasting class time that could have been spent on doing our project".

Another student with a retentive memory, indicated by his very extensive general knowledge, suggested that a teacher should not presume that an absence of writing was always equated with an absence of learning.

I was taking down mental notes. So I think you've got to remember, it may not look like we're doing the work, but we're taking down mental notes. [Student]

I found the responses of both these students surprising. I read the first student's disengagement as disinterest, when in fact it was discomfort with the subject matter. The other student provided me with a similar insight over a presumption it is so easy to make: that lack of physical evidence of work must mean that learning is not taking place. In the future, I shall approach students a little differently, with a concerned enquiry rather than a direct challenge to the behaviour they exhibit.

### *Randomly selected groups*

For an election-based activity, students worked in randomly constituted, co-operative learning groups in which some members were allocated specific tasks. The activity itself was enjoyed by the students, although the random nature of the groups produced mixed reactions:

It is good to have the groups for all the election stuff, but I personally would have rather have been in a group I'd chosen to be in. However, I can see an upside to it, which is we get to work with other people and we're taken out of our comfort zone. [Student]

If a teacher chucks you in a group with people you don't know or don't work well with, then you're not going to get much work done ... some of the group members weren't friends ... and they didn't work very well together. They were just, like bickering. [Student]

One of the GATE students found her group particularly frustrating. In her journal, she wrote:

Today working in a group was quite painful, nobody listened, they talked about other things ... Some of my team mates had good ideas, but some people's input was just stupid ... What could [have] been done in 10 minutes.... took us half an hour. [Student]

One student indicated that it was important for teachers to be aware of those students whom "it would not be a very smart move" to have particular class members work with—what was needed was a way of ensuring that students were not in a group with someone with whom they did not feel safe.

Student responses indicated some acceptance of randomly selected groups under certain circumstances. There is no doubt, however, that they much preferred groups based on individual choice. The response of these students to structured co-operative learning groups indicated tension between their preference and the currently popular strategy of co-operative learning as a means of engaging students. The students certainly appeared to be engaged, but probably would have reacted negatively if this strategy had been used extensively, as it ran counter to what they valued most: choice.

#### *Individual work or self selected groups*

A desire to explore the reaction of GATE students to group work was an important factor in the construction of this research project. It was felt that the desire of such students to excel, combined with their desire to control both outcome and process, could well lead them to prefer individual over group work. There was some evidence from the students to support this view. One of the GATE students wrote in her journal:

I find working in a group OK if everybody co-operates, but I like working by myself better because I absolutely hate it when something is not done to my full ability. And what annoys me is that I can do better than some people who don't really care about the project. [Student]

Another student wrote: "I don't think I want to do it in a pair, last time I got stuck with all the work."

Personal compatibility removed the concern students had about being let down in an activity with a high-stakes product. Indeed, all students that were part of this research expressed a preference for working in groups, as long as they could choose with whom they could work:

Choice is good because ... you know who you will work well with and who you don't, and who works well and who doesn't. [Student]

I like group work because you get to talk with other people and share your ideas. [Student]

While enjoying the freedom to choose the outcome and create their own working relationship, one of the GATE students expressed reservations about giving a class too much choice:

I don't know if our class is very good at making choices ... they choose who they want to [work with] and they're obviously friends and then they do a little bit of work and talk a little but and then at the end they realise, "Oh, we haven't done much".

On the choice of what to do. I don't know if we did very well on that. [Student]

It is clear that the students preferred working in groups rather than on their own. They felt that in groups the learning was more enjoyable, and being able to bounce ideas off one another raised the level of engagement and helped their learning. All the students preferred being able to choose whom to work with. Some students noted that they might talk more with friends, but it was also easier to co-operate closely with them, and that this could be beneficial.

### *The importance of choice*

The most compelling finding of the research was the value students attached to choice. Choice about working on their own or with other people with whom they felt compatible appeared to increase motivation and enjoyment. Students also enjoyed being able to choose the kind of outcome they produced at the end of this section of work. In a journal entry, one student wrote:

It is an interesting assignment you have given us and is very good because it caters for *everybody* and *everybody's* needs. [Student]

One student clearly preferred a learning strategy that was less directed and maximised choice:

I love choice because it means that you're not being told what to do exactly. I like choosing what I do, not being told everything because it's too much like your parents. [Student]

Another student commented: "I really liked the choice: it gave you a chance to be creative".

The importance attached by all students to the concept of choice as a factor in motivating and engaging them in their learning was a surprise to me.

### **Final thoughts**

The research demonstrated the fact that diversity within a classroom is very dynamic. A theme or topic that individuals might find interesting in one circumstance could be problematic if personal circumstances change.

The most significant observation to come out of the research is the importance of choice to this group of students. It helped ensure the creation of a comfortable learning environment for each student. It appeared to motivate most students by ensuring that learning was an enjoyable, creative activity over which they had control.

How might the importance of choice for these students impact on my classroom practice? If students do find the sense of being in personal control an important motivator, I shall seek to make it a greater part of my teaching practice. On reflection, it seems so obvious that student choice is perhaps one of the most effective means of catering for diversity within the classroom.

The reaction of the students to randomly selected groups has raised questions in my mind about the frequent use of group-based formal co-operative learning strategies in the classroom. Some students found randomly selected groups unsettling and sometimes threatening. I will look at ways of making the group selection process less than totally random when using such strategies.

Perhaps the most important lesson in this for me is the most basic of all: assume nothing; check it out; and look and listen before you leap.

If diversity in the classroom proved to be a dynamic concept, the research process also proved to be much more fluid than I anticipated. At the outset of this project, I expected that, with a research question devised and methodology decided upon, the research would naturally proceed on its predicted course. I had not expected that there would be such a need to adapt aspects of the process to the demands of time and place.

The most interesting lesson for me, however, was the importance of unexpected outcomes. I had thought I would gather some useful data about the preferences of students for working individually as opposed to working in groups. I had not expected that the most significant finding to come from the research would be something else: the importance of student choice. As a researcher, the two most significant lessons I have taken from the project are to follow a sound, appropriate, but adaptable methodology, and to have an open mind. Out of the tension produced by the unexpected can emerge the most valuable insights.





# Appendix F: Case study 6

## Co-operative learning in drama

### Aim of the project

This research sought to gain the reactions from a diverse group of students in the top Year 9 class to co-operative and group work in a drama context. It involved the same class and students as the social studies project, and also used student journals, teacher observations, and interviews. Both the methodology and the problems encountered were the same as those experienced in the social studies project.

### The task/process

The students in their groups had to write, produce, direct, and provide costumes and props for a play they had to create. They had studied the J. B. Priestley (1948) classic *An Inspector Calls*, which had themes of power and responsibility, the individual and the community. The class was required to incorporate these ideas into their plays.

### Results

Despite holidays and absences, all groups completed the task, to varying degrees of success. However, it was felt by the teacher and some students that many students did not reach their full potential (through a range of factors, discussed later).

### Interview feedback

The English interviews were done individually. This allowed students to speak freely of any difficulties they had with other members of the group or the process. The interview questions were:

- What did you think about having so much freedom/choice regarding the writing, producing, and directing of, and providing of props and costumes for, your plays?
- What were the good and bad points about having to do so much of the work in preparing for your own play?
- What did you think about having the choice of selecting your own group and/or the teacher selecting a group for you?
- Was working on your plays better or worse than you expected? Why?
- What did you feel about the group deciding who took on the roles of writer, director, costume provider, props provider, etc., and would you have preferred the teacher to have chosen the roles for you? Why?
- What did you learn about yourself in the process?

- What did you learn about group work?
- What would you do differently next time?
- How did you choose whom to work with?

There were also spontaneous questions to ascertain a deeper level of understanding, starting with “Tell me about ...” and “Explain ...”, etc.

## **Student choice**

### *Group choice*

The research considered the importance of choice, particularly the choice of whom to work with. This was also an issue for the English teacher. There were obvious possibilities:

- teacher selecting groups on personality, roles, ability, or a combination of these
- students choosing their own groups
- randomly selected groups.

Students were given the choice of choosing their own group or being put into groups by their English teacher. Nearly all the students chose their own groups. A few minor adjustments were made because of numbers and one socially challenged student was placed into a more appropriate group. Within this framework the students’ diverse backgrounds and cultures were less significant as personalities and the ability to interact came to the fore.

### *Role choice*

... but if you had chosen it, then it was like no arguments, that’s what you do, like instead of “Oh, I’m not sure if I want to do that, oh I want to do this, no way, hang on ...” instead of “You’re doing that and you’re doing this”. [Student]

All the students felt that it would have been far better if the teacher had chosen the roles for them rather than letting them as a group decide who did what. Most struggled with the consequences of choosing the roles—some constantly wanted to change roles, others attempted total control of the group, and other students took the roles that required the least amount of work.

One student thought the groups could have been arranged by roles first, by allowing students to choose the role they wanted then letting them decide who worked with whom after that. Another thought there could have been more structure or greater teacher involvement in picking students for the roles or helping the students to pick the roles. He suggested an equal workload in all the roles would have been better, with every student writing a scene and being responsible for their costumes, props, direction, etc. Overall, the students wanted far more teacher intervention in this aspect.

## Findings

This entry from a student journal at the start of the project reflects the general consensus:

It was good that he let us choose whether we chose our groups or not ... [Student name] is the only serious one in the group and the rest of us are cracking jokes. That is a problem of choosing our own group BUT if you put us in groups we would not be enthusiastic to work. [Student]

All students interviewed felt obliged to work with their friends. All thought this was the best way to enjoy their co-operative work, and were glad that they had done this, but also conceded that more and better work could have been achieved through teacher-selected or random groups.

Students learnt for themselves that co-operative work with their friends doesn't always mean the most fruitful results and working with friends doesn't always mean a successful result:

*Interviewer:* What did you think about having the choice of selecting your own group and/or me the teacher selecting a group for you?

*Student:* Well, everyone kind of went for picking your own group because it means you can work with your friends but that's not always good and it would have been better if we were told right you're working in this group and tough if you don't like it because in real life you have to work with people you don't like and it would be good as well as normal topics like math and English, etc., you can learn life skills and so you always get to choose the people you like it doesn't always end up for the good because then you can end up talking about what you did last Friday, etc.

### *Barriers to learning (in groups)*

#### **Attitudes and personalities**

... when we picked the groups we thought that they would be okay to work with but it turned out some people were really, really hard to work with and it was like why don't you just agree with us. [Student]

Students found that there were more conflicts working with their friends than they had expected. Even though they were glad to have worked with them, some thought that the quantity and quality of work would have been better in random or teacher-selected groups as this would remove the issue of obligation.

One student did not enjoy the drama as much as the others, as she was the studious self-appointed leader and her friends did not always do as they were told. When asked in the interview what she had learnt about herself, she said: "That I am manipulative and bossy!" Another student commented that being with their peers kept them within their comfort zones.

Another student thought the problems of co-operative work could be overcome by choosing different people to work with and that they compromised more than they should have:

Yeah, it's like we went three-quarters of the way and they meet us there instead of meeting us halfway and discussing it all, we had to go the extra to make it work. [Student]

### **Not sharing the workload**

... so it's really good that you do group work. The only thing is that if you have some one hard working and someone who's not they both get credited for the work. [Student]

With students choosing their roles, workloads inevitably differed. Overall the students thrived on choice, but didn't all appreciate some of the consequences. The biggest issue was with the scriptwriting. Although some students wanted to control the play's direction, they soon reneged after finding out how much work was involved. The idea was that they would write it as a group, all contributing ideas, lines, and stage directions, with one person writing it down. Most of the groups in fact had a discussion and then expected the scriptwriter to write it up at home that night. Control was also a problem. The scriptwriter in one group felt that being writer meant control over direction, which naturally caused problems;

[Student name] was the only person who wrote the stuff so it was easy for us, but I kind of felt sorry for [him]. I asked if he wanted me to write and he said no. [Student]

### **Absences and time**

Absences were the major problem in the English research. Many of the students are involved in other school activities. Some took time off because of health or family holidays. As a result, the productions needed more time and ran into the holidays. The interviewed students felt that some momentum was lost. Over the holidays students forgot lines and what they had to bring. Some students said that a stricter time guideline would have helped them focus them more and therefore would have improved the final result.

### **Student growth**

All of the students thoroughly enjoyed the experience of co-operative work on their plays. They all felt they had grown in confidence in relating to others and in performing dramatic presentations. One student felt she had grown in confidence as a leader. At her intermediate school she was sometimes asked by her teachers to be a leader, at other times she volunteered to be a leader. This experience reinforced her leadership qualities.

Another student gained confidence in asserting himself—when members of his group persisted in changing roles, he said no. One student became less shy, another grew more confident in dealing with people, and another felt able to say what he wanted to his peers without feeling embarrassed:

I found that I won't slack off as much. That I built my confidence. [Student]

He realised he could work with his friends and not get off task just because they were his friends.

Nearly all the students interviewed preferred to choose whom they worked with, even though they acknowledged some problems in staying on-task at times because of this. However, all conceded that there were benefits to teacher-selected or random groups:

... I felt obliged to do it with my friends, but I would have preferred it if it was quite random, not at the start, but I would have. [Student]

By allowing the students to choose and, therefore, having like-minded people and personalities in a group also meant conflict. One student commented on the fact that his group was full of leaders and suggested that groups could be based on a mixture of personalities.

### **Summary**

Overall, it was a positive learning experience. The students grew in confidence in expressing individual viewpoints and in relating to others. They also learnt that although working with friends, might be most socially enjoyable, it was not as easy and productive as they had expected.

The students became more willing to accept working in random or teacher-selected groups and learnt that the resulting diversity can be more beneficial to co-operative learning.

As the English teacher, I learnt that:

- greater teacher facilitation was needed in allocating and maintaining roles within groups for the plays
- mental, intellectual, emotional, and personality differences were more relevant than diversity of cultural and socioeconomic backgrounds

expectations of personality conflicts and their resolution were generally addressed, and I gained professional confidence as a result.