



Tui Valley School: Analysis of Variance 2004

Implementing the Numeracy Project

This example deals with the implementation of the Numeracy Project in a Full Primary School. It shows how the Analysis of Variance from 2004 and the Charter / Strategic Goal "Aim to improve teaching, learning and achievement in Numeracy . . .", have informed the Annual Plan for 2005 including budgetary provisions.

Student Achievement in Mathematics

Strategic Goal: Aim to improve teaching, learning and achievement in Numeracy with particular focus on 'critical' numeracy.

Evidence Base / Historical Position

In 2003 the early Numeracy Project was introduced for Years 1 – 3, & in 2004 Advanced Numeracy was introduced for Years 4 – 6. Based on collation of assessments the following targets were set for achievement in Number:

1. The majority of Year 3 pupils will have reached Number Framework Global Stage 5 (Early Additive Part-Whole)
 2. At the end of Year 6, 70% of students will be working at Global Stage 7 of the Number Framework. (Early Curriculum Level 4)
- Ongoing work on basic facts for Years 4 – 6 resulted in adoption of Target 3.
3. All Year 6 pupils will score 80% in the school's basic maths mastery tests in addition, subtraction, multiplication and division.

Note: Children not achieving at expected levels will receive additional support. (See Analysis of variance for TARGET GROUPS)

Targets	Outcomes	Analysis	Evaluation
1. The majority of Year 3 pupils will have reached Global Stage 5 (Early Additive Part-Whole) by the end of the year.	Target 1 Not achieved. 35% had reached Stage 5.	95% of Year 3's were working at Global Stage 4 or above. This still represents achievement well beyond national norms.	This target may have been too ambitious as it equates to the beginning of Curriculum L3 expected at Year 5. The target will be retained for 2005 as a focus for the Numeracy strand. Programmes in 2005 will also focus on other strands.
2. At the end of Y6, 70% of students will be working at Stage 7 of the Number Framework (Early Curriculum L4).	Target 2 Achieved. In 2004 84% reached Stage 7 (Advanced Additive and Multiplicative).	Achievement of this target indicates these children are working beyond national norms. Of the 16% who did not reach the target, 10% were working at Stage 6 (Curriculum Level 3) which is the expected level. 6% were working at Stages 4 & 5. These children are receiving small group learning support.	2004 was the first year for the Numeracy Project in Years 4-6. Achievement of the current Year 6 cohort has historically been strong so this result may not be typical of what can be expected of other cohorts. ANP will be continued in 2005; the target will be retained and evaluated at the end of the year. Teachers in Year 5 have noted some gaps in number knowledge, especially whole number and decimal place value. Programmes in 2005 will need to ensure full coverage of the Numeracy Strand.

Targets	Outcomes	Analysis	Evaluation
3. All Year 6 pupils will score above 80% in the school's Basic Facts mastery test of addition, subtraction, multiplication & division.	Target 3 Achieved. All students scored over 80% in the 4 tests, average for all four processes was 90%.	Timed tests for each process are completed by all Year 6 students. For most, results were even for +, -, x. Division results were generally lower by 10–15% as many students didn't finish the test in time indicating slower recall of division facts.	We have traditionally aimed for mastery of Basic facts by the end of Y6. Exceeding this Target in 2004 means we will look at adopting the target for Year 5 in 2005. Teachers will provide more focus on practice and application of division facts to improve speed and recall.



Tui Valley School: Annual Plan 2005

Action Plan 2.1 Numeracy

Charter/Strategic Goal: Aim to improve teaching, learning and achievement in numeracy.

Annual Plan Objectives/Strategies: Continuance of the Early Numeracy Project - Year 1-3.
Consolidation and development of Advanced Numeracy Project – Year 4-6.
Introduce Intermediate Numeracy Project (Year 7&8) Collection and analysis of INP achievement data for to set Targets for 2006.

- Targets:**
1. The majority of Year 3 pupils will have reached Number Framework Stage 5 (Early Additive Part-Whole) by the end of the year.
 2. At the end of Year 6, 70% of students will be working at Global Stage 7 of the Number framework. (Early Curriculum Level 4).
 3. All Year 5 pupils will score above 80% in the school's Basic Facts mastery test of addition, subtraction, multiplication and division in Term 4.

Action Required	Who	Cost /Resources	Target Date	Expected outcome	Actual Outcome
Numeracy support for new staff: <ul style="list-style-type: none"> • Workshop at local schools. • Order resource books. • Online tutorials with buddy teacher support. • Provide time for testing. 	SP/AT Two new staff members	Approximately \$xxx per teacher if needed.	Term 1	New staff able to implement ENP and ANP in classroom maths programmes. Testing completed by end Term 1.	Expected outcomes achieved. 2 new teachers received training and support. Initial testing completed by end of Term 1.

Action Required	Who	Cost /Resources	Target Date	Expected outcome	Actual Outcome
ENP – Continue to resource and provide for professional development through: <ul style="list-style-type: none"> ● courses ● collegial sharing and support ● streamlining BSM resources 	AT	Professional Development \$xxxx Teaching resources \$xxxx		Continue to see use of Numeracy programme in all Year 1 – 3 classes. Achievement of Target for Year 3 students.	
ANP -Continue regular professional development and in class support: <ul style="list-style-type: none"> ● regular staff meetings ● planning support ● advisory support ● courses & workshops ● collegial sharing and support ● observations and conferences. 		Professional Development \$xxxx Class support \$xxx Teaching resources \$xxxx Support from NP facilitator 4 hours per teacher.		Increase use and improve delivery of numeracy programme in all Year 4 – 6 classes. Achievement of Target for Year 6 students.	
INP <ul style="list-style-type: none"> ● Intermediate teachers and participate in INP workshops during 2005. ● Facilitator to be advised (4 staff). 		Resources 4x \$xxxx Teacher release \$xxxx Resources/labour \$xxx ICT \$xxxx		4 Teachers trained. INP implemented in all Y7 & 8 classes. Term 4 assessments will be analysed to set an INP Target for 2005.	
Expand teaching resources for ENP & ANP New resources for INP.		Management time ICT time		Integrating maths. Efficient resourcing.	
Integrate Numeracy Project assessment into reporting & tracking frameworks for 2005/6.		Management time		Data collection and collation via Classroom Manager. Inclusion of GLOS results on all student profiles.	Achieved during Term 2 in time for Year 1 – 6 teachers to use for mid-year reports.
Develop Overview for Maths for 2005: <ul style="list-style-type: none"> ● trial and review for 2006. 				Overview available for teachers to ensure balance and coverage of all strands.	Achieved in March. All syndicates using overview for Term 2 planning.