"USING NATIONAL SKILLS MONITORING TO IMPROVE THE QUALITY OF TEACHING AND LEARNING - THE SOUTH PACIFIC EXPERIENCE"

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1.   Introduction

Of the six (6) education goals Ministers of Education set up during the World Education Forum in Dakar (2000), one focused on the quality of education and called on countries to;

> *"Improve all aspects of the quality of education and ensure excellence of all, so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills."*

In the Pacific, the Ministers of Education (2009) agreed on a new focus for the development of education, Pacific Education Development Framework (PEDF) with a new vision "*Quality Education for all in Pacific Island countries*". The framework also lays out its mission and strategic goals for Education and Training in the Pacific 'based on the underlying imperative of quality education for all and ensuring access and equity in provision' (PEDF 2009- 2014). This is also in line with the international commitments such as the MDGs and EFA goals.

With the increasing focus on the quality of education, especially in relation to the quality of the teaching and learning process and what goes on in the classroom (Margaret Forster, ACER), the role of assessment becomes increasing crucial. It is therefore desirable for educational establishments and stakeholders in education to emphasize the role of assessment information in improving learning and subsequently the quality of education. Consequently, assessment is now being widely used to identify problematic areas in education as well as establishing student achievements to check against set curriculum expectations.

Limited opportunities as well as resources have resulted in many Pacific Island Countries (PIC) adopting assessment practices that assume the traditional role of facilitating selection. This has led to education authorities adopting a narrow approach to assessment until recent times when they realized the potential for assessment to improve the quality of education. Efforts to change the assessment practices were met with challenges that resulted in countries adopting practices that they could afford rather than what was good for the education system or for the students themselves. This is one of the major challenges facing the PICs today, developing an assessment system that can address the needs of the curriculum in terms of the expected outcomes, as well as responding to the diverse demands from stakeholders and all users of assessment results (Pongi, 2004).

If the quality of education in PICs is to improve, the education authority in each country needs to redirect the focus in its assessment towards improving the teaching and learning processes and put in place strategies that would ensure the achievement of the various learning outcomes (Pongi 2004).

As the only regional authority in assessment in the pacific, the South Pacific Board for Educational Assessment (SPBEA) has put forth various initiatives aimed at more efficient use of assessment techniques and assessment information, but also focus on the long term goal of improving education quality in its member countries.

2.   SPBEA Initiatives

2.1 Despite the continuing importance played by examinations throughout the Pacific, SPBEA is committed to promoting improvement in the use of assessment for the purposes of classroom learning. As part of its effort to improve teaching and learning through effective use of assessment, SPBEA has since 1990, tried to move towards a broad-based assessment focusing on students achievements on learning outcomes. Capacity building

programmes were put in place to empowered both teachers and students to move towards viewing assessment as a means to improving teaching and learning, rather than a mere instrument of measurement. This involves the use of assessments to gather as much information as possible about their students then use this information to develop intervention strategies to improve student learning.

2.2 To keep abreast with global developments in assessment, SPBEA conducted capacity building workshops on the use of 'assessment for learning' in its member countries. This however faced a lot of challenges due to the limited opportunities available either in further and higher education or in the employment market where assessment was still perceived primarily as a tool for ranking and selection. This enhanced the misconception that results of high stake examinations are the best indicators of students' learning and thus the quality of education.

2.3 In such situation schools and teachers alike direct attention to coaching students to achieve high marks in the external examinations. Consequently the focus of teaching shifted from achieving the curriculum outcomes outlined in the curriculum to those being assessed in the examination resulting in the learning not achieving the level and breadth expected in the curriculum. Redirecting teaching and assessment to reflect the curriculum outcomes requires refocusing of teaching without compromising the external examinations. In such environment teachers are expected to be in tune with the various standards of performance across all learning outcomes, and be able to develop assessment instruments that accurately and reliably determine the level of performance of students.

2.4 SPBEA has undertaken to use assessment as an additional tool for use by students and teachers in their effort to secure improved and demonstrable levels of learning. At the beginning of the initiative, emphasis was on increasing the range of assessment methods used other than the conventional paper and pen examination. This enabled a wider range of skills and experiences, reflecting the diversity of learning styles, to be assessed that would otherwise have been overlooked. This prompted increasing support for formative assessment programmes designed to ensure that relevant regular "formal" feedback are channeled back to students for the improvement of their learning as well as the teacher's teaching.

2.5 Over the past nine years SPBEA has promoted the value of assessment in the monitoring and promoting of standards in the Pacific islands through the development of national benchmarks for both Literacy and Numeracy. Instruments (standardized tests) for the monitoring of such standards based on the country's curriculum learning outcomes at year 4 and year 6 were also developed. In several cases, the literacy instrument includes tool for monitoring English and vernacular competencies. In recent years SPBEA, with support from UNESCO and UNICEF developed regional benchmarks for Literacy, Numeracy and Life Skills. These benchmarks are learning outcome statements derived from the primary years 2, 4, 6, and 8 curriculum documents in the respective subjects of the various countries.

2.6 To be able to monitor student achievements in the various learning outcomes, achievement levels were developed for each learning outcome thus making it possible for teachers to identify the extent to which each student progresses towards optimal achievement of the learning outcome. As outlined by the Assessment Reform Group (2002);

The process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go to and how best to get there.(Assessment Reform Group, 2002)

2.7 Although based on the mastery theory, the principles involved in establishing achievement levels offered a strategy for teachers to be able to pinpoint the actual achievement of each student. On this basis SPBEA, in close collaboration with UNESCO in the Pacific, developed a module, with emphasis on assessment, for teachers targeting the improvement of teachers' teaching competencies to use appropriate assessment practices in the classroom. Titled "Are our Students Learning? How Do We Know?", the module focuses on developing the capacity of the teacher to use the appropriate and relevant assessment methods to gather information that would enable them to monitor what each student is able to do and in particular, what they are <u>not</u> able to do so that they can be given the specific help they need.

2.8 Another initiative that SPBEA is involved in is one that focuses on monitoring any change in teachers' teaching strategy, both in focus and in style, as a result of shift in focus towards learning outcomes and the pathway described by defined achievement levels. The intention is for the teacher puts in place a system of self-appraisal that also uses peer appraisal as well.

2.9 This paper attempts to describe the ways that SPBEA is currently attempting to combine three separate but related assessment approaches, each contributing towards the goal of realizing improvement in the quality of teaching and learning.

    i)   Using national assessment data for classroom improvement
    ii)   Developing learning levels to improve student performance
    iii)   Developing learning levels for teachers' self improvement

3. Using national assessment data for classroom improvement

3.1 The decision to monitor literacy and numeracy was based not only on the recognition of the importance of literacy and numeracy to all aspects of one's life, but also on the understanding that it would be the most direct way of determining the quality of education in the country. Not only are literacy and numeracy at the core of quality education, they help pave the way for further learning in other areas.

> *"Achievement of the literacy and numeracy outcomes is crucial because of their impact on other areas of learning. Studies in other parts of the world have established the close link between literacy and numeracy and student performances in other disciplines. Poor reading and writing skills become effective constraints for learning in other subjects. This is particularly true in most of the countries in the Pacific."(Pongi, 2004)*

Globally, literacy and numeracy are considered as essential life skills and everyone has a right to be literate and numerate.

> *"Literacy is a foundation of learning. While schooling is the principal route for acquiring reading, writing and numeracy skills, an exclusive focus on formal education for children ignores stark realities: first, too many students leave school without acquiring minimum literacy skills, second, one-fifth of the world's adult population – 771 million adults – live without the basic learning tools to make informed decisions and participate fully in the development of their societies." (*EFA Global Monitoring Report 2006, UNESCO)

The central role of literacy and numeracy in empowering people and laying the foundation for future achievements in education are reasons why both developing and developed nations continue to monitor literacy and numeracy as well as other educational outcomes in the effort to monitor improvements in education.

3.2 In 2002 SPBEA started work in a number of countries on developing monitoring instruments based upon the specific curriculum operating within each country. Because of differences in the curriculum in each country, country-specific instruments were

necessary despite the significant similarities. Between 2004 and 2008, SPBEA worked with the curriculum and assessment units in six Pacific Island countries to develop, trial, fine tune and administer these instruments. In each country the instruments were developed targeting primary years 4 and 6. These curriculum-focused and standards based instruments were administered with the intention of using the information collected to set the literacy and numeracy baseline standards for each participating country; Tuvalu (TUSTA), Vanuatu (VANSTA), Solomon Islands (SISTA), Kiribati (STAKI), Tonga (STAT) and Nauru (NAUSTA).

3.3   The six countries made their intentions clear, they wanted instruments that were based on their own curriculum and would enable them to determine;

- ❑ the levels of performances of all students or groups of students at crucial levels in their system.
- ❑ the extent to which students achieve the key literacy and numeracy outcomes of the curriculum at the chosen level
- ❑ specific areas of weaknesses, both in teaching and learning that need to be urgently addressed.
- ❑ what remedial or intervention programmes need to be put in place either at the school, district, provincial or national levels.

The countries also made it clear that there should not be any attempt to compare one country with another. While the strategy for developing the instruments for the countries was similar, the fact that they were curriculum-focused and standards-based with strong local context nullifies any rationale for comparing performance between islands. Data gathered or information relating to this work remains the property of the country.

Part of the development process was the identification of a cross section of key skills that can be considered representative of the particular domain. Once identified, a series of statements (learning outcomes) clearly describing what is expected were carefully framed in clear and specific language.

3.4   For both literacy and numeracy, benchmark indicators for each learning outcome have been identified and appropriate achievement levels developed in close consultation with local authority. Because of the multiplicity of learning outcomes, a panel of subject professionals selected from the Ministry of Education officials, one for literacy and one for numeracy, selected a representative sample from the outcomes listed under each learning area. The sampled outcomes were then used as the basis for developing the instrument with sufficient items designed to assess students' levels of achievement in each of the sampled outcome under each learning area. The benchmarks as well as the achievement levels were used as the basis for both the development of the items that make up the instruments and the monitoring of the literacy and numeracy standards.

3.5   With data being collected for several years, baseline standards have since been established at Years 4 and 6 for Literacy and Numeracy in Tuvalu, Solomon Islands, Kiribati, Vanuatu and Tonga. Such standards will form the basis for any future monitoring of the literacy and numeracy standards when necessary. The instruments are expected to remain relevant for as long as the situation in each country, especially the curriculum expectations and learning outcomes, remains unchanged. Any review of the curriculum outcomes in the future will warrant a review of the instrument to ensure its continued relevance and validity. But given that baseline standards have been set and the last administration of the tests was 3 – 5 years ago in these countries, plans are

underway to administer these instruments again at the end of this year in Tuvalu, Vanuatu, Solomon Islands and Kiribati to find out any changes in the situation.

3.6 Analysis of the information collected from participating countries show a significant gap between the anticipated learning outcomes as stated in the curriculum documents and the realized performance of a large percentage of students. Given the country-specific nature of the information and the fact that the instrument targets the curriculum expectations, as well as the heavy involvement of local officers experienced in the teaching of literacy and numeracy, there is every reason to believe that the situation represented by the data fairly reflects the situation in schools, districts, provinces and countries.

3.7 The instruments have been structured in such a way that allow for student achievements in each learning outcome to be measured by means of carefully designed achievement levels arranged in a developmental manner with the highest level of achievement representing total acquisition of all the anticipated skills and total achievement of the anticipated learning outcome on the one hand to non acquisition of any of the skills inherent in the learning outcome. Identification of achievement levels (typical student achievements) that fairly represent the true achievements of students along the achievement continuum enables student achievement on a learning outcome to be monitored over time. Ideally the number of achievement levels would be determined by the nature of each learning outcome. However for simplicity and consistency it was decided that six achievement levels ranging from L0 (no recognizable achievement) to L5 (total achievement of the learning outcome) were to be adopted, with L1 to L4 depicting partial achievement of the learning outcome. An example of the achievement levels for a Standard 6 Mathematics standardized test is appended as *Appendix 1*.

3.8 Description of each level of achievement is carefully constructed that clearly describes what the student at each level is able to do while at the same time indicating what the student needs to be able to do to get to the next level. The combination of levels L0 and L1 provided a measure that would identify students whose achievement was deemed to be at a critical level, and for whom numeracy and literacy was fast becoming a disappearing dream. If the percentage of such students was relatively low, say below 10%, one might be justified in saying that in any population there will be some who struggle with the general level of expectations. But if the percentage of students in the L0 + L1 category is of the order of 30% or higher, it raises serious question of "How" and 'Why"? With results in many countries showing percentages of this order, one is driven to seek reasons. With the data produced providing a snapshot of the state of numeracy and literacy at the end of four years of schooling in the case of one standardized test, and at the end of six years of schooling for the second standardized test, one is led to believe that such situation has not developed overnight but over longer period from the lower levels.

3.9 Simply reporting the results of the standardized tests does not in itself effect any behavioural change that will improve the situation. In its effort to help countries address the challenge and narrow the identified gap, SPBEA has undertaken two initiatives. The first, known as Assessment Research Tool for Teaching and Learning (ARTTLe) focused on the development of a series of activities (including items) targeting the various achievement levels. The intention is for teachers to use such specially designed items to find out the extent to which each student is achieving the learning outcome

The second is a teacher competency module that focuses on building teachers' capacity in various teacher competencies such as planning, assessment, monitoring student

progress, etc. Such module intends to empower teachers to be able to organize frameworks that allow for student progress to be systematically monitored over time while providing opportunity for teachers to focus teaching on the learning outcomes. As earlier mentioned this module, mentioned earlier "Are Our Students Learning? How Do we Know?" was developed in conjunction with UNESCO and it is being implemented in all of the SPBEA member states.

4.   Developing achievement levels to monitor student achievements

4.1   The intention in this initiative is to develop the tool teachers need to be able to monitor student achievement and progress on a given domain. It requires the unpacking of the key objectives for literacy, numeracy and life skills as indicated in the curriculum for years 2, 4, 6 and 8. This allows for the defining of achievement levels for these outcomes so teachers are able to use them, together with the information collected through the administration of the instruments, to monitor student achievement and progress of individual students. In their paper 'Inside the Black Box,' Black and William drew upon 250 sources that had investigated the value of ongoing formative assessment inside the classroom and that improving formative assessment raises student performances.

4.2   A combination of a clearly worded learning outcome, and clearly defined achievement levels within that outcome, provides teachers with a robust basis on which to base their assessment of student achievements. Just as importantly, this allows students to be able to target the learning outcome, and also see the route and effort they need to pursue to reach the target.

4.3   The concept of defined learning outcomes has been widely discussed in the region, and there are several examples of curricula having been written with an emphasis on learning outcomes. The move towards outcomes-based curricular has assisted in empowering teachers to identify the anticipated student learning outcomes. What is less common however is the practice of determining the levels of achievement that exemplify typical behaviour a student has to demonstrate as indication of how much have they achieved and how much they have yet to achieve in order to fully achieve the learning outcome.

4.4   While standardized instruments focus on achievement of learning outcomes expected at the end of perhaps a two year period, the teacher is faced with far more discrete units of study, each of which has a number of anticipated learning outcomes to be targeted in their teaching. If clear and specific statements describing each of the achievement levels for each of the learning outcomes a teacher has to target over a complete course say from Years 2 to 8, teachers have in their possession the tool they need to provide guidance for improving the achievement of each student in their care. This strategy focuses on identifying what each student is able to do or not able to do with what they have learnt. This provides opportunity for teachers to design intervention strategies for helping improve student's learning.

4.5   With the move from content-based to outcome-based curricula that is currently being undertaken in most of the SPBEA member countries, the SPBEA initiative provides an ideal opportunity to focus the emphasis on teaching and learning with the assessment focusing on students achieving the learning outcomes. This is only possible if efforts are made to identify achievement levels for short term learning. At frequent and regular intervals teachers need to know what progress their students are making. Students also need to be able to recognize their own progress. Cross matching student performance

with achievement levels readily available in the classroom would be a teaching strategy of immense value for both the teacher and the student.

4.6   While delivering the SPBEA – UNESCO teacher competency module, "Are Our Students Learning? How Do We Know?" to PICs, it became clear that participants in the training workshops could see substantial merit and benefit in this approach for both teachers and students, especially in monitoring the effectiveness of teaching and learning. Despite the concern over the amount of effort needed to identify the various learning outcomes and their respective achievement levels, there was great interest in pursuing with the initiative in a more coordinated way with the full approval of the Ministry of Education. This is because individual teachers may not have time or the expertise to prepare all the learning outcomes and achievement levels for themselves, thus the initiative from SPBEA.

4.7   Armed with the information that the standardized tests have provided, and encouraged by the response of education officers to the concepts contained in ARTTLe and the module, a way forward towards improvement in standards of literacy and numeracy and life skills is proposed in this initiative. However teachers need to have the competency to be able to carry out this work and school principals should be in a position to be able to evaluate the effectiveness of teachers. Without this initiative, many students in classrooms throughout the Pacific would continue to drift with little headway being made towards achieving prescribed learning outcomes. Clearly there is a need for a change in classroom practice so that problems are identified early. Of course teachers may well know that specific students are having problems, but may not be certain or cannot pinpoint the problem or may not have a clear idea of how best to tackle the problem. To complete the value of such initiative, teachers would need to be encouraged to discuss the achievement levels with the students, so that both teacher and student share an understanding of what is required and advise each other on progress being made.

5.   Developing learning levels for teachers self improvement

5.1   Teachers are constantly facing innovation and change; changes of emphasis, changes in methodology, and changes in the level of demands placed upon them. Keeping pace with change, presents teachers with continuing challenges. As teachers can only do what they are capable of doing, it is only right that they receive as much guidance and assistance as is required for them to do their job in the most effective way.

5.2   In recent years there has been a forceful drive in many countries in the Pacific to change the presentation of the various syllabuses and the emphasis in the curriculum from one that focuses on content towards one that focuses on learning outcomes. The perception is that clearly worded learning outcomes provide teachers and their students with an understanding of the curriculum demands facing them thus allowing teachers to frame their lessons so that, together with their students, progress can be made in achieving mastery of the outcomes.

5.3   Both SPBEA initiatives, the ARTTLe and the 'Teacher Module' focus on developing the competency of teachers on the use of classroom assessments so they are able to use such newly acquired skills in their everyday teaching. With such skills and competencies, and with baseline in literacy and numeracy in both English and the vernacular now in place in some countries, it would be interesting to see whether or not teaching through the use of learning outcomes and their associated achievement levels does in fact raise the overall national performances of students.

5.4   It seems sensible to have in place an accompanying strategy for determining the degree to which teachers have been able to make the transition and to determine how effective their teaching has become. More importantly it is a strategy which provides teachers with constructive feedback on their application of classroom assessment methods. Whatever strategy that might be adopted, it is certain that to be successful teachers need to be involved in assessing their own effectiveness. It is also important that the assessment is part of a professional development process rather than a tool with which to 'threaten' teachers. This initiative suggests that core purpose is to raise and sustain the quality of learning.

5.5   Teachers, individually and collectively, must be clear on what it is they are being asked to do and hence assessed against. What do we mean by 'effective classroom teaching'? How would we define the standards to be applied when assessing teacher competence in teaching? The teachers being assessed should be offered a proper opportunity to 'show what they know and can do' against predefined competency levels. These competency levels would have been developed over an extended period of time after much trialing and modification, thus one could say that they have been reliably set and further that there is sufficient relevant information available for valid conclusions to be reached.

5.6   It is in the interest of every school to have a healthy teaching environment and a strong team of competent teachers. As supervisors, ministries of Education and Principals are charged with ensuring that teachers assess their own effectiveness throughout the year where the self assessment focus on those aspects of teaching which have been identified as significantly contributing towards student progress. Supervisor assessment of teacher performance is also important in providing a set of judgments against which the self-assessment can be compared. Both assessments focus on the development of the teacher.

5.7   SPBEA is in a position to help countries develop the tool necessary to carry out the analysis of the teacher assessment information if they so wish but countries need to be able to develop national teacher standards based on key teacher competencies with appropriate competency levels for each standard. Once these competencies have been identified, and negotiations with interested parties concluded, the system could then be used with the assessment providing evidence of the level of performance of teachers in each standard. The competencies as well as the performance levels can then serve as the tool for assessing and monitoring teacher performances to identify needs for professional development and as a basis for planning for professional development activities.

5.8   Teachers would then use the tool to rate their own performance in each of the competency standards and then discuss the results with their peers or managers within the school. After each assessment, areas of strengths as well as areas needing improvement are identified. Analysis of the results would allow the supervisor as well as the teacher to agree on a plan for improvement which both the school and the teacher then address through appropriate interventions. The competencies as well as the performance levels designed clearly describe what every teacher should possess in order to teach effectively. Examples of competencies are appended as *Appendix 2*. The lists are not meant to be exhaustive and are only provided as a sample of possible types of competencies and how the progression with each competency is constructed.

5.9   The actual assessment of teacher competency using criteria similar to that given in the table and/or other means, the timing of the exercise, at school and/or national level, the frequency of use of the assessment tool, who the assessors should be, how the

assessment is conducted and the consequent feedback to the system to improve student learning and student achievement must be determined by the individual member countries. It is hoped that as countries take this initiative on board, it will improve the teacher effectiveness so that student growth and learning is maximized and hence reflected in their achievements.

6.   Conclusion

SPBEA over the years has recognized that assessment is a major tool in the teaching-learning process which eventually will improve the quality of education in the Pacific. It can provide both the teacher and the learner with the feedback necessary for improvements to take place. However it is crucial that the information is translated into useful steps for action, not presented in its raw state: both learners and teachers need to know what to do next. The three assessment initiatives that SPBEA has embarked on and are currently being developed will go a long way.

It is envisaged that when all three initiatives are fully implemented by interested countries, both teachers and learners will be in much better positions to identify the weaknesses at certain points in the system, determine how much each student have achieved in terms of the intended learning outcomes of the curriculum, and review the performances of teachers and the strategies they employ to bring about positive changes and subsequently take the quality of education in their respective countries to another level.

At this point in time the planning has revolved around the use of the learning outcomes for the Literacy and Numeracy testing to build the explicit learning levels with the thesis being that as teachers use the achievement levels it will improve the understanding and skill development of the students with explicit targeting and intervention. While the project implementers are confident of this approach, the truth will be in the achievements of the students in the next round of regional Literacy and Numeracy testing. The first round of Literacy and Numeracy testing (which prompted this developmental support model) has effectively established baseline data. Monitoring and evaluative strategy will focus on the extent of teacher behavioral change and will link this to any change in the student results for Literacy and Numeracy. The strategy seeks to use the influence of a national test to drive some purposeful pedagogical change not merely as anticipated outcome, but strongly supported by a set of performance level guides. The strategy also seeks to support the use of developmental levels not by just presenting a theoretical position and 'leaving the teachers to do it' but by providing and publishing levels to support teacher intervention and support for their students. The final part of this strategy uses a professional development approach that mirrors the same 'levels techniques' that they are applying for their students own growth. As Black and William have said,

"Teachers will not take up attractive sounding ideas, albeit based on extensive research, if these are presented as general principles which leave entirely to them the task of translating them into everyday practice" - Inside the Black Box, 2001

The SPBEA with its member countries believe that the approach being taken responds to the challenge set by Black and William back in 2001 but utilizes the power of a national test to focus attention on the teaching dilemma faced by teachers to determine exactly '*how and where can I best intervene to improve the outcomes for my students.*' The generation of the levels in the South Pacific has gone a long way towards solving this dilemma.

References

Earl, L. (2003) "*Assessment as Learning, Using Classroom Assessment to maximize student learning*"

Packer, S. & Aggio, C. (2006) "*The Performance of Commonwealth Countries in Achieving the Millennium Development Goals in Education and the Dakar Education for All Goals*", Commonwealth Secretariat, London.

Pongi, V. (2004), "*Making the Switch from Assessment for Ranking Towards Assessment for Learning: The Challenges Facing The Small Island States of the Pacific*", Paper presented at the 3rd ACEAB Conference, Nadi, Fiji, 8-12 March 2004.

Stobart, G. (2008) "*Testing Times The uses and abuses of assessment*"

"*Improving Quality in Education*" (2005) Report of Workshop by League for the Exchange of Commonwealth Teachers, Commonwealth Secretariat, London.

SPBEA Internal Papers

Setting Literacy and Numeracy Baseline Data in Vanuatu: "*A report on the monitoring of Literacy and Numeracy achievements at the end of year 6*" VANSTA 2 Report, SPBEA November 2007

APPENDICES

Appendix 1: Standard 6 (Numeracy) - Achievement Levels & Assessment Criteria

TOPIC		ACHIEVEMENT LEVELS & ASSESSMENT CRITERIA					
		Level 5	**Level 4**	**Level 3**	**Level 2**	**Level 1**	Level 0
NUMBER OPERATIONS	**Working with Nos.**	Identify place value of decimal numbers Round off to nearest tenth or whole number. Write equivalent fractions in simplest form Convert fractions to decimals and vice versa. Calculate % of a quantity, include % increase (mark-up) or % decrease (discount) Express quantities as ratios Use ratio to compare quantities.	Has no difficulty with most of the outcomes (at least 5) but still having minor problems with one aspect of one or two of the outcomes. Or Have major difficulty with one of the outcomes	Has no difficulty with many of the outcomes (at least 4) but still having minor problems with one aspect of three or four of the outcomes. Or Have major difficulty with two or three of the outcomes	Has no difficulty with some of the outcomes (at least 4) but still having minor problems with one aspect of each of the outcomes. Or Have major difficulty with four or five of the outcomes	Has major difficulty with all of the outcomes although starting to show signs of achieving some aspects of one or two of the outcomes.	Has no sign of achieving any aspect of any of the outcomes. Makes an effort but does not make sense. Makes no effort at all (include blanks)
	Addition/ Subtraction	Add/subtract up to 5- and 6-digit whole numbers with and without regrouping (include negative answers). Add/subtract fractions both with like and unlike denominators. Add/subtract decimals involving tenth and hundredth (e.g. money).	Has no major difficulty with any of the outcomes for both addition and division but may have difficulty grasping one aspect of one or two of the outcomes for either addition or subtraction.	Has no major difficulty with many of the outcomes in both addition and subtraction but may have minor difficulty with each of the outcomes. Or have major difficulty with one or two of the outcomes in either addition or subtraction.	Has difficulty with most of the outcomes in both addition and subtraction but shows sign of starting grasp main aspect of one or two of the outcomes. Or Appear to have achieved some aspects of a number of the outcomes but still need to do more to achieve each outcome.	Has major difficulty with all of the outcomes although starting to show signs of achieving some aspects of one or two of the outcomes.	Has no sign of achieving any aspect of any of the outcomes. Makes an effort but does not make sense. Makes no effort at all (include blanks)

	Multiplication/ Division	Multiply/divide up to 3 and 4-digit whole numbers by 2-digit whole numbers (with and without remainder for division where remainder can be expressed as fraction or 1-decimal number) Multiply/divide up to 2-decimal numbers by a 1-digit whole number.	Has no major difficulty with any of the outcomes for both multiplication and division but may have minor difficulty with one aspect of one or two of the outcomes.	Has no major difficulty with many of the outcomes in both multiplication and division but may have minor difficulty with each of the outcomes. Or have major difficulty with one or two of the outcomes in either multiplication or division or both.	Has difficulty with most of the outcomes in both multiplication and division but shows sign of starting grasp main aspect of one or two of the outcomes. Or Appear to have achieved some aspects of a number of the outcomes but still need to do more to achieve each outcome.	Has major difficulty with all of the outcomes for both multiplication and division although starting to show signs of achieving some aspects of one or two of the outcomes.	Has no sign of achieving any aspect of any of the outcomes. Makes an effort but does not make sense. Makes no effort at all (include blanks)
	Problem Solving	Carry out calculations using more than one operations. Solve everyday problems involving at least one operation. Solve problems involving percentages (% increase or % decrease, etc). Solve simple problems involving money	Has no major difficulty with solving problems using numbers although may have minor difficulty with translation of word problem into mathematical sentences	Have major difficulty with one aspect of the outcomes either in translation or in solving the problem.	Has difficulty with understanding the problem let alone translation although starting to show sign of grasping the approach to solving the problem	Has major difficulty with all aspects of the outcomes for problem solving. Makes an effort and shows sign of starting to understand how to solve problems	Has no sign of achieving any aspect of any of the outcomes. Makes an effort but does not make sense. Makes no effort at all (include blanks)

Overall National

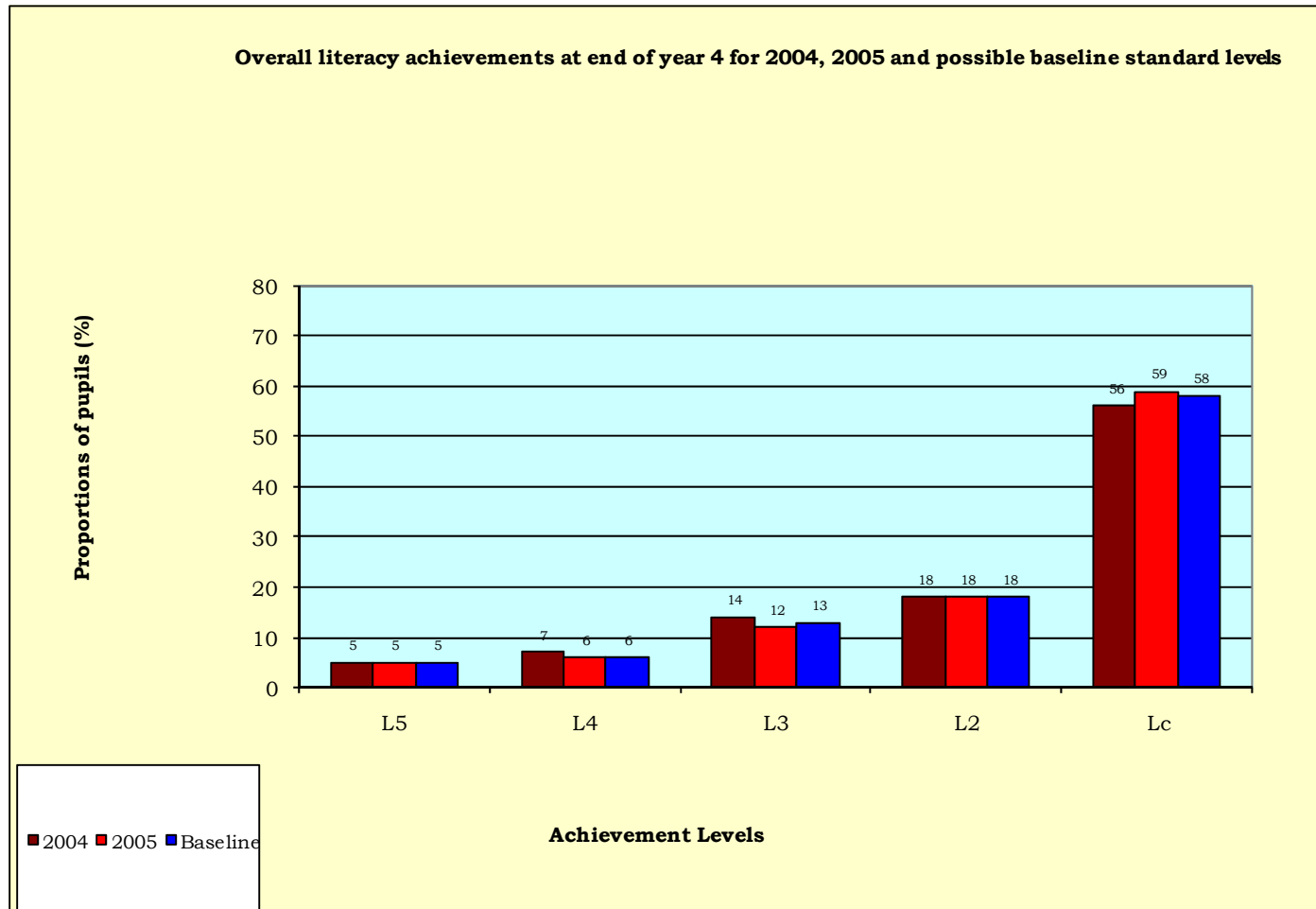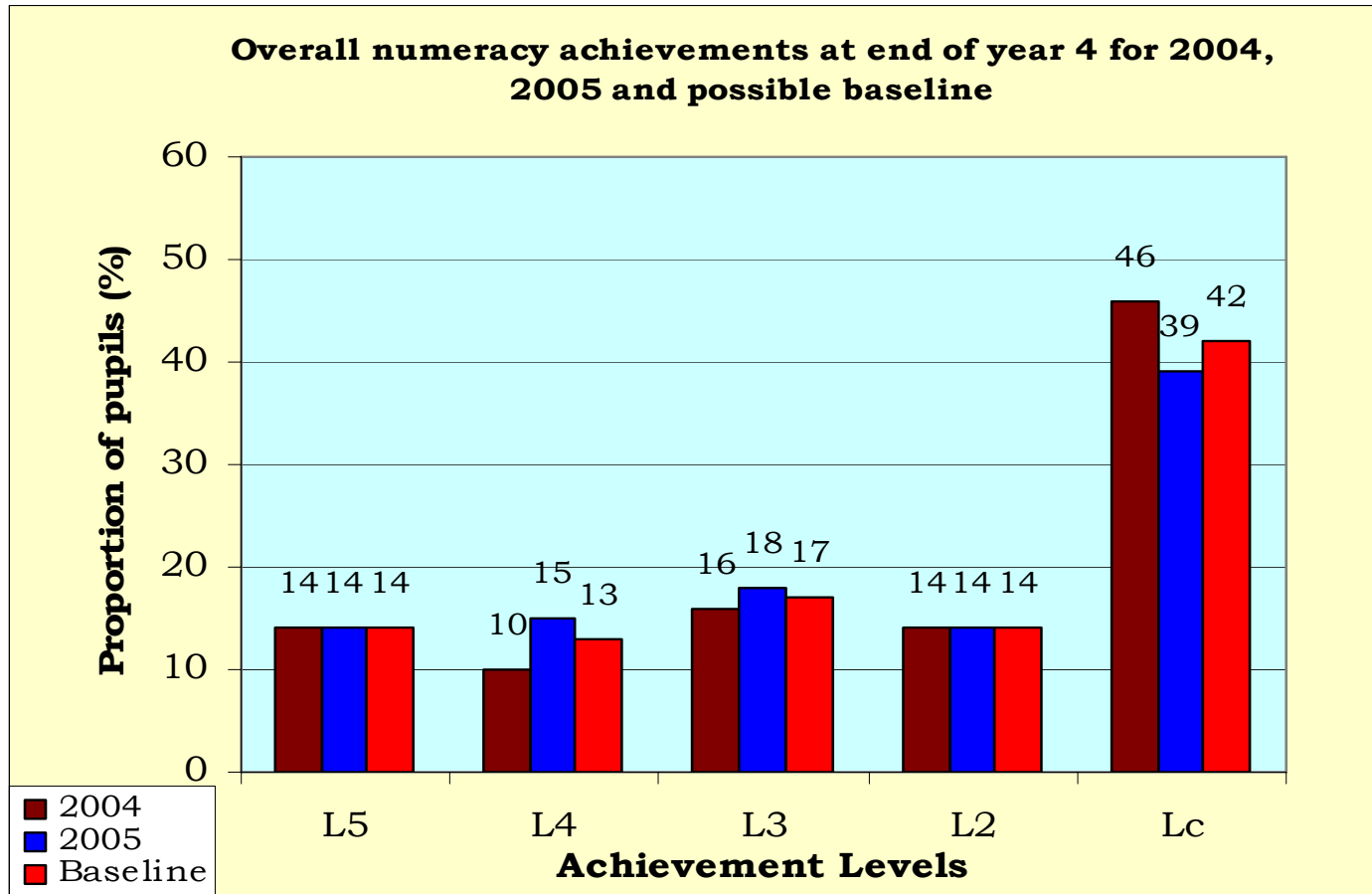***Figure 1:*** ***Overall literacy achievements at end of Year 4 for 2004, 2005 and possible literacy baseline standard***

Figure 2:   *Overall numeracy achievements at end of Year 4 for 2004, 2005 and possible numeracy baseline standard*

Overall numeracy achievements at end of year 4 for 2004, 2005 and possible baseline

**Appendix 2**: _**Teacher Self Assessment Grid**_

Aspect of Competencies assessed	Level 4	Level 3	Level 2	Level 1	Level 0
Quality of my feedback	I always give feedback to my class and to individual students. My feedback is constructive and indicates the path to improvement for the students.	I always give feedback to my class and to individual students. My feedback often lacks an indication of how students can improve.	I always give feedback to my class, but rarely provide feedback to individual students. My feedback often lacks an indication of how students in the class can improve.	I sometimes forget to provide any feedback to the class	I rarely give any feedback to the class
Use of learning outcomes	Every lesson I prepare is built upon specific learning outcomes. I always make sure that I have discussed the learning outcome with the class so that they know what we are trying to achieve.	Every lesson I prepare is built upon specific learning outcomes, but I do not discuss the learning outcome with the class.	Only about 70% of my lessons are built upon specific learning outcomes, but I do discuss the learning outcomes with the class	Less than 50% of my lessons are built upon specific learning outcomes.	To be honest I still teach to content and do not think about the learning outcomes
Establishing achievement levels	I always try to make sure that I identify the path towards each learning outcome by identifying achievement levels. I discuss the achievement levels with my students so that they can see the path towards the learning outcome.	I always try to make sure that I identify the path towards each learning outcome by identifying achievement levels. I don't discuss the achievement levels with my students.	I am trying to develop achievement levels for the learning outcomes, but have not used them in my teaching.	I have not adopted any achievement levels for the learning outcomes	To be honest I don't understand what value achievement level statements have

Aspect Assessed	Level 4	Level 3	Level 2	Level 1	Level 0
Involving students in their own assessment	I always encourage students to determine how far they believe they have moved towards achieving learning outcomes.	I only respond to students who come and ask me how well they are progressing towards achieving learning outcomes.	I rarely discuss progress towards achieving learning outcomes with students	I don't involve students in their own assessment, but think it might be worth trying	I see no value in getting students to think about how well they are doing
Identifying student progress	I try to make sure I know the progress being made by each of my students at the end of each week, and I have a strategy for helping me do that	I try to make sure I know the progress being made by each of my students at the end of each week, but find it difficult to do this	I report on progress at the end of each term, and also if the information is asked for by a parent or the Principal.	I only report on progress at the end of each term	I only provide marks for term tests
Implementing intervention	As soon as I find weakness in my teaching to a learning outcome I revise my approach and try again. When I find a student with a problem I arrange help either through a fellow student or with a few minutes of special attention, and sometimes engage the help of the parents	I really only intervene with problems experienced by the whole class. I revise my approach and try again. I find I do not have the time for individual intervention, but do advise the parents.	I go back over points that I think the class is having problems with.	I advise the students to go over the work at home.	I think I need to get on with teaching the brighter ones. If I spend time going over work with the weak ones, the bright ones will suffer.