Innovation configurations: Case studies of reform curriculum implementation in PNG

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Abstract

This article presents the stages of implementation of the reform outcomes-based curriculum in eight rural and remote schools in East Sepik and Madang provinces. The instrument used to collect the data was the Innovation Configuration Checklist derived from one of the diagnostic dimensions of the Concerns-Based Adoption Model (CBAM). This enabled reflection on what was happening in the fifty four classrooms in which the four stages of implementation of the reform outcomes-based curriculum (awareness, involvement, engagement and ownership) were measured. For most schools, they had only received the reform curriculum recently so they were at the involvement as well as the awareness stages.

Key words: innovation configurations, outcomes based education, curriculum implementation

Introduction

Since 2003, primary school teachers in PNG have been struggling to come to terms with the implementation of the outcomes-based curriculum that was produced by the National Department of Education. Implementation of the outcomes-based curriculum has required the schools to change their day to day operations in terms of programming collaboratively, facilitating, assessing and stocking up of adequate curriculum materials. To be able to help individual schools, it is necessary to know where they are in the stages of implementation. One of the tools of the CBAM is an Innovation Configuration checklist (IC). The Innovation Configurations Checklist (Hall & Loucks, 1978) is one of the diagnostic dimensions of the Concerns-Based Adoption Model (CBAM).

Innovation Configurations (IC) describes an innovation or change in action. An innovation configuration checklist is created 'to clarify what an innovation or change actually looks like along a continuum, from high-quality implementation to least desirable' (Hord, Stiegelbauer, Hall & Archie, 2006). It is used to measure how individuals are implementing a program or practice. This concept was used to describe various operational forms of implementation of an outcome based syllabus as teachers adapted it for use in their particular situation.

The use of the checklist is important because it confirms whether or not and to what degree is implementation taking place in the classrooms by the individual

teachers. There are four stages of implementation: awareness, involvement, engagement and ownership.

Figure 1. Curriculum Implementation Ladder

Curriculum Implementation Ladder (for teacher educators)

	Indicators Teacher educators can demonstrate all/some of these	Evidence
 **Implementation Steps** **Step 4: Ownership** Teacher educators confidently train preservice and inservice teachers to use the syllabus approaches consistent with the reform curriculum	As for **Engagement** plus… • Use varied and balanced assessment & reporting practices • Adopt curriculum principles e.g. gender, student centred learning • Assist with and/or model innovative and inclusive practices for other lecturers as well as preservice and inservice teachers • Ability to explain syllabuses, teacher guides and other reform documents to others e.g. community • Provide opportunities for students to actively apply learning in practical contexts	• Students actively engaged in learning • Courses consistent with curriculum requirements • Teacher educators are role models and champions of reform
Step 3: Engagement Teacher educators consistently teach and model the reform curriculum approaches in their context	As for **Involvement** plus… • Revise courses with focus on learning outcomes • Use range of student-centred activities in tutorials • Modify teaching & learning programs in response to assessment trialling • Use criterion referenced assessment	• Sets teaching & learning activities relevant to course outcomes • Sets clear criteria for assessment • Involves students in practical activities • Changes made in response to assessment if required • Writes and communicates explicit and exemplary assessment plans
Step 2: Involvement Teacher educators use some of the curriculum and policy concepts and contexts to trial new ideas and approaches	As for **Awareness** plus • Trial new ideas and approaches in lectures and tutorials • Include appropriate curriculum, policy and planning documents as course readings • Identify a wide range of teaching resources • Trial different assessment methods and tasks	• Includes of assessment methods other than tests, essays or group presentations in courses • Discusses educational issues with others • Monitors and evaluates ideas and approaches being trialled
Step 1: Awareness Teacher educators demonstrate an awareness of curriculum, policy and planning documents	• Understand the rationale for the reform • Have read syllabuses, teacher guides and policy and planning documents • Identify some practices that need to be reviewed	• Uses reform curriculum documents to find information to assist with course writing and programming • Discusses similarities and differences between the old and reform requirements eg assessment, with colleagues and students

References: National Assessment and Reporting Policy (NARP), National Curriculum Statement (NCS), Study Guide/In-service Units, Teachers Guides, Syllabus documents, Outcomes charts, School policies, Planning & programming files

(Curriculum Development Division, 2005)

This research study explored the extent to which teachers were implementing the reform curriculum in ways intended by its developers?

Design of the survey

Multiple perspectives were obtained in determining the components for the checklist and what behavior would represent high quality to least desirable behavior. After consultation with others, eleven components were identified. These were: syllabuses, teachers' guides, curriculum support materials, teaching methods, programming, assessment, relevance, attendance, community support, leadership and collaboration. These were deemed to be critical components for implementation of the reform curriculum.

To create descriptors for each component, questions were asked such as: *What would (name of component) look like in the classroom? What if (component) was not going exactly like (previous description)? What are some other ways it might look like? Can you give me a version of (component) that would be unacceptable to you? How would you like this component to be reflected in classroom practice?* From responses, the researcher created a checklist for the eleven components with descriptors for use that was ideal, acceptable, fair or unacceptable. These are presented in Table 1.0.

Table 1: Innovation configuration checklist

Ideal (1)	Acceptable (2)	Fair (3)	Unsatisfactory (4)
1. Syllabuses Teacher has the seven subject syllabuses in own classroom.	Teacher shares and accesses seven subject syllabuses with other teachers of that grade.	Not all subject syllabuses available to teacher on convenient bases.	No access to reform syllabuses.
2. Teachers Guides Teacher has the seven teachers' guides in own classroom.	Teacher shares and accesses seven subject teachers' guides with teachers of that grade.	Not all teachers' guides available to teacher on convenient bases.	No access to reform teachers' guides.
3. Curriculum support materials Many CRIP supplies can be seen in classroom and use is evident.	Lots of CRIP supplies at school but in central place – limited access by staff.	Poor supply of material to support reform – teacher makes lots of own materials themselves.	Few curriculum support materials available and in use.
4. **Teaching methods** Enquiry based, child centred and bilingual in and out of classroom.	Child-centred lessons in English only.	Mainly teacher centred, a little child-centred and bilingual.	Teacher centred methods using only English.
5. Programming Program follows Outcome based and times guidelines in teachers' guides.	Outcome based program as designed by teachers themselves.	Mainly objectives oriented – Little use made of outcomes.	No attempt to use outcomes.
6. **Assessment** Focuses on criteria for achieving bilingual outcomes in syllabuses in all subjects.	Focuses on achievement of learning outcomes in all subjects in English only.	Focuses on core subjects' assessment – some attempt at outcome basis.	No change to old ways of assessment.
7. **Relevance** Strong evidence of relevance of classroom learning to local environment.	Some evidence of relevance of classroom learning to local environment.	Little evidence of local culture in classroom displays.	Classroom displays do not reflect a PNG identity.
8. **Attendance** Teacher and all students present and good gender balance with students.	Teacher and most students present and gender balance reasonable.	Teacher and most students present but low number of female students.	Teacher absent. Many students absent and low female numbers
9. **Community support** Community people involved in activities that help students achieve outcomes.	Community people involved in school projects with children and out of classroom experiences.	Community people indirectly involved in supporting implementation through building etc.	Poor relationship between community and schools.
10. **Leadership** Strong evidence of leadership shown by the school administration in the implementation process.	Some evidence of leadership shown by the school administration in the implementation process.	Little evidence of leadership shown by the school administration in the implementation process.	No evidence of school administrative leadership for implementation process.
11.**Collaboration** Strong evidence of collaboration shown by all staff members regarding the implementation process.	Evidence of collaboration shown by only some of the staff members regarding the implementation process.	Evidence of collaboration shown by few staff only regarding the implementation process.	No evidence of collaboration shown by all the staff regarding implementation.

A double line appears on the checklist. Descriptors to the left of the double line represent acceptable use. Descriptors to the right of the double line represent weak or unacceptable use. By allocating a numerical score for each descriptor (shown in brackets), the checklist enabled scores to be awarded for observable ways the various components of the reform curriculum were being implemented by individual teachers.

The assumptions for the *ideal* configuration of reform curriculum implementation were that individual teachers had full sets of syllabuses and teacher guides, there were supporting resources particularly for students, student-centred teaching methods were used, teaching programs reflected the outcomes in the syllabuses, assessment was criterion based, topics were relevant to students' everyday lives, attendance was good, and that there was community support, good leadership within the school and collaboration amongst teachers. While interviews provided data from teachers related to curriculum implementation, it was the observation checklist that provided data of the researcher's observations of curriculum implementation as reflected in classroom practices.

The researcher completed the checklist for each classroom observation by simply circling the number for the descriptor which best matched what was happening. When completed, a picture emerged about which components were being applied in an acceptable manner in the classroom and weaker components which could become priority areas for corrective action. To gain a picture of what was happening across a school, the researcher prepared a recording sheet as shown in Table 2, on which raw scores for each component were entered for the teachers where observations were made at a school.

Table 2: Recording sheet for checklist raw scores

Variable	**Gr. 3**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 7**	**Gr. 8**	**Total**
1. Syllabuses							
2. Teachers Guides							
3. Support materials							
4. Teaching methods							
5. Programming							
6. Assessment							
7. Relevance							
8. Attendance							
9. Community support							
10. Leadership							
11.Collaboration							
Total							

Scores for the *total row at the bottom* of the table would indicate a holistic score for the overall implementation of the curriculum on a class-by-class

basis. Class scores of 8-32 would indicate acceptable levels of implementation and class scores of 33 and higher would indicate that improvement was needed. Classes with lower scores could serve as models for teachers of classes who received higher ratings. Scores for the *total column on the right* of the table would indicate how well individual components were rated across all grades. Lower scores indicate better use than higher scores. As an example, if OBE programming scored a total of 19 and OBE assessment scored a total of 25, it would mean that assessment could be a higher priority for a professional development session than programming.

In addition, the numbers of teachers for each variation within a component were added and converted to a percentage of the total number of teachers for whom checklists were completed in each school. These calculations were entered on a recording sheet shown in Table 3.

Table 3: Recording sheet for checklist score totals and percentages

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses				
2 Teachers guides				
3 Curriculum support materials				
4 Teaching methods				
5 Programming				
6 Assessment				
7 Relevance				
8 Attendance				
9 Community support				
10 Leadership				
11Collaboration				

When completed, a picture emerged about which components were being applied in an acceptable manner at a school and weaker components which could become priority areas for corrective action.

Findings

Innovation configuration checklist (Ambunti)

In Ambunti Primary School, observations were done in eight classrooms. The classes were for grades 3A, 3B, 4A, 4B, 5A, 5B, 6A&6B composite class and 7A. The number of classes receiving scores in the various categories of the innovation configuration checklist are shown in Table 4. Scores to the left of the double line reflect acceptable levels of implementation of recommended strategies for reform curriculum implementation. Scores to the right of the double line reflect unacceptable levels of implementation.

Table 4. Innovation configuration checklist percentile scores (Ambunti)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses		25%	75%	
2 Teachers guides		25%	75%	
3 Curriculum support materials			75%	25%
4 Teaching methods		25%	75%	
5 Programming		25%	75%	
6 Assessment			87.5%	12.5%
7 Relevance		75%	25%	
8 Attendance		12.5	75%	12.5%
9 Community support				100%
10 Leadership			100%	
11Collaboration			100%	

Eleven components were rated in eight different classrooms making a total of 88 ratings. Of those, only fifteen (17%) were at acceptable levels. The other 73 (83%) ratings reflect weak or unacceptable implementation of recommended strategies for reform curriculum implementation. The best scoring component was that learning was relevant to students' everyday lives, although this could also have been the case before the reform curriculum was introduced.

There were incomplete sets of syllabuses and teacher guides in both lower primary classrooms and upper primary classrooms. New resources to support the reform curriculum were virtually non-existent. Languages other than English were not being used in the classroom. Even in the grade three classroom, English was the language of instruction. Lessons were teacher directed rather than student centred. Intended outcomes of lessons were unclear and not explicitly stated. Assessment records indicated that old ways were still being used, although programming documents indicated some attempt to follow the outcome based curriculum. There was high student absenteeism in all except one classroom. There was no observable evidence of community support and little evidence of positive leadership and collaboration between teachers in relation to reform curriculum implementation. It was expected that this would change over time as teachers received more in-services, became familiar with the materials and supporting resources were developed.

Innovation configuration checklist (Baklo)

My time in Baklo was limited to only one day. Because of time constraints, observations of classroom practice were carried out in only two of the four classrooms. One was the classroom with grades five and six students and the other was the classroom with grade eight students. The innovation configuration checklist was used and scores awarded for observable ways the various components of the reform curriculum were being implemented by individual teachers. The number of classes receiving scores in the various

categories is shown in Table 5. Scores to the left of the double line reflect acceptable levels of implementation of recommended strategies for reform curriculum implementation. Scores to the right of the double line reflect unacceptable levels of implementation.

Table 5. Innovation configuration checklist percentile scores (Baklo)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses		50%	50%	
2 Teachers guides		50%	50%	
3 Curriculum support materials			100%	
4 Teaching methods	50%		50%	
5 Programming			100%	
6 Assessment				100%
7 Relevance	50%			50%
8 Attendance		50%	50%	
9 Community support	100%			
10 Leadership		100%		
11Collaboration				100%

Eleven components were rated in two different classrooms making a total of 22 ratings. Of those, nine (41%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other thirteen (59%) ratings reflect weak or unacceptable implementation.

It was observed that most of the new syllabuses and teacher guides were in the grade eight classroom but only a few were in the other classroom. New resources to support the reform curriculum were virtually non-existent. Lessons were very student centred and activity based in one classroom but more teacher directed in the other. Assessment records indicated that old ways were still being used, although programming documents indicated some attempt to follow the outcome based curriculum. Student attendance was good in the grade eight classroom but weak in the composite grade five and six classroom. Community support and leadership for reform curriculum implementation was observed to be strong for both classes that were observed and this obviously contributed positively to the overall ratings. There was no observable evidence of collaboration.

Although this sample size was very small, it does indicate that there was observable evidence that teachers were involved with the reform curriculum. Since October 2006 it is highly probable that further progress has been made.

Innovation configuration checklist (Drekikier)

Observations using the innovation configuration checklist were done in ten classrooms at Drekikier Primary School. Classrooms visited and observed were

the 3A&3B composite class, 4A, 4B, 5A, 5B, 6A, 6B, 7A, 8A and 8B. The checklist enabled scores to be awarded for observable ways the various components of the reform curriculum were being implemented by individual teachers. The number of classes receiving scores in the various categories is shown in Table 6.

Table 6: Innovation configuration percentile scores (Drekikier)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses		100%		
2 Teachers guides		20%	80%	
3 Curriculum support materials		30%	70%	
4 Teaching methods		100%		
5 Programming		90%	10%	
6 Assessment		100%		
7 Relevance	80%		20%	
8 Attendance		40%	60%	
9 Community support			100%	
10 Leadership			100%	
11Collaboration		100%		

Scores to the left of the double line reflect acceptable levels of implementation of recommended strategies for reform curriculum implementation. Scores to the right of the double line reflect unacceptable levels of implementation.

Eleven components were rated in ten different classrooms making a total of 110 ratings. Of those, 66 (60%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other 44 (40%) ratings reflect weak or unacceptable implementation. Classrooms in Drekikier primary school were generally reflecting the adoption of the principles underpinning the new reform curriculum as might be expected as this comparatively early stage of implementation.

All teachers had access to syllabuses although this was generally on a shared basis. There were incomplete sets of teacher guides in both lower primary classrooms and upper primary classrooms. All teachers had participated in in-service professional development activities. Most lessons were student-centred and intended outcomes of lessons were usually stated. The content of topics was relevant to the lives of the students. New resources to support the reform curriculum were virtually non-existent. Some teachers were using a bilingual approach. Languages other than English were being used by the teachers in the classroom to clarify topics which the students found difficult to understand. In the grade three classrooms, both English and *Tok Pisin* were the languages of instruction. Assessment records and programming documents indicated that new ways were being used.

Leadership for the reform process was shown by the deputy head-teacher and the senior teachers and there was strong evidence of collaboration between most teachers. Overall there was pleasing evidence in August 2006 that Drekikier teachers were applying principles of outcome based education in their classroom practices. I observed that teachers differed in how they were implementing the reform curriculum and this is to be expected.

However, it is helpful if change agents are able to exemplary practices which, if capitalised on, could be of great use in assisting change effort. Equally important, change agents need to monitor implementation and make observations that identify areas requiring improvement. It was expected that there would be further improvement as the Drekikier teachers received more in-services, gained greater confidence with the materials and supporting resources were developed. There was evidence of in-service activities that focused on programming and assessment as seen in wall-charts made by teachers.

Innovation configuration checklist (Mersei)

During my visit to Mersei Primary School, observations using the innovation configuration checklist were done in four classrooms with grade three, four, five, and the multigrade six and seven classes. The checklist enabled scores to be awarded for observable ways the various components of the reform curriculum were being implemented by individual teachers. Table 7 depicts the configuration of the curriculum implementation process at Mersei at the time the observations took place. Variations to the left of the double line represent acceptable use and those to the right represent unacceptable use.

Table 7. Innovation configuration checklist percentile scores (Mersei)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses		75%		25%
2 Teachers guides		100%		
3 Curriculum support materials		25%	75%	
4 Teaching methods			100%	
5 Programming		100%		
6 Assessment		100%		
7 Relevance		25%	50%	25%
8 Attendance				100%
9 Community support			100%	
10 Leadership	25%	75%		
11Collaboration	100%			

Eleven components were rated in four different classrooms making a total of 44 ratings. Of those, 25 (57%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other 19 (43%) ratings reflect weak or unacceptable implementation. It was the

researcher's impression that classrooms were generally reflecting the adoption of the principles underpinning the new reform curriculum as might be expected at this comparatively early stage of implementation.

It was observed that there were no syllabuses in the upper primary classroom and incomplete sets of teacher guides in both lower and upper primary classrooms. There were some new resources to support the reform curriculum such as the textbooks for Personal Development and Making a Living at the upper primary level. However, the lower primary classrooms lacked resources to support the reform curriculum. Languages other than English were not being used in the classroom. Even in the classroom for grade three students, English was the language of instruction. Some lessons were teacher directed while others were student centred. Assessment records and programming documents indicated that an outcomes approach was being used. There was good leadership shown by the head-teacher and the teachers collaborated very well with each other. Student attendance was quite poor due to school fee problems. Community-related topics in classrooms were not so evident because most of the work was destroyed by the floods. Some of the materials were removed from the classrooms and stored in safer places away from the floodwaters.
Overall there was some evidence in April 2007 that Mersei teachers were applying principles of outcome based education from the reform curriculum in their classroom practices. It was expected that this would improve as teachers received more in-services, became more familiar with the materials and supporting resources were received.

Innovation configuration checklist (Bongu)

Observations using the innovation configuration checklist were done in seven classrooms at Bongu Primary School. The classes were for grades 3, 4, 5, 6, 7, 8A and 8B. The data are presented in Table 8 which depicts the configuration of the curriculum implementation process at Bongu Primary School.

Table 8. Innovation configuration checklist percentile scores (Bongu)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses		57.1%	42.9%	
2 Teachers guides		57.1%	42.9%	
3 Curriculum support materials		14.3%	85.7%	
4 Teaching methods	14.3%	42.9%	28.5%	14.3%
5 Programming		28.5%	42.9%	28.6%
6 Assessment		71.5%	28.5%	
7 Relevance		14.3%	71.5%	14.3%
8 Attendance	28.5%	71.5%		
9 Community support			85.7%	14.3%
10 Leadership		14.2%	42.9%	42.9%
11Collaboration		14.2%	85.7%	

Variations to the left of the double line represent acceptable use and those to the right represent unacceptable use. Eleven components were rated in seven different classrooms making a total of 77 ratings. Of those, 30 (39%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other 47 (61%) ratings reflect weak or unacceptable implementation. Some attempt was being made to implement the ideas of the outcome based reform curriculum, but more time and effort was needed, as might be expected at this comparatively early stage of implementation.

There were incomplete sets of syllabuses and teachers' guides in both lower primary classrooms and upper primary classrooms. New resources to support the reform curriculum were virtually non-existent. *Tok Pisin* and English were both being used in the classrooms. Lessons in the two grade eight classes were teacher directed rather than student centred. In the grade eight B class, the teacher was still using objectives to prepare lessons for the core subjects (English, Mathematics, Science and Social Science) but used outcomes to prepare lessons for the non-core subjects (Making a Living, Arts and Personal Development). Assessment records and programming documents in grade eight indicated that old ways were still being used while the other grades were making some attempt to adopt the new ways.

Overall there was some evidence in March 2007 that Bongu teachers were applying principles of outcome based education for the reform curriculum in their classroom practices especially in the lower grades. It was expected that this would improve as teachers received more in-services, became more familiar with the materials and supporting resources were received.

Innovation configuration checklist (Ranara)

Table 9. Innovation configuration checklist percentile scores (Ranara)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses		50%	50%	
2 Teachers guides			100%	
3 Curriculum support materials		16.7	50%	33.3%
4 Teaching methods		66.7	33.3%	
5 Programming		100%		
6 Assessment			50%	50%
7 Relevance	16.7%	66.6%	16.7%	
8 Attendance	16.7%	50%	33.3%	
9 Community support			100%	
10 Leadership			100%	
11Collaboration			100%	

Observations using the innovation configuration checklist were done in six classrooms at Ranara Primary School. The classes were for grades 3, 4, 5, 6, 7 and 8. The data presented in Table 9 depict the configuration of the reform curriculum at Ranara Primary School. Variations to the left of the double line represent acceptable use and those to the right represent unacceptable use. Eleven components were rated in six different classrooms making a total of 66 ratings. Of those, 23 (43%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other 35 (65%) ratings reflect weak or unacceptable implementation.

Teachers were using an outcome based approach in writing documentation for teaching programs. This was evidence of teachers applying knowledge and skills gained from in-service sessions that focused on planning and programming. Teaching methods were generally student-centred and topics were relevant to children's lives. There were incomplete sets of syllabuses in the upper primary classrooms as there were more teachers teaching at that level than the sets that were received. There were adequate sets of syllabuses for the lower primary classrooms. Sets of teacher guides in both lower primary classrooms and upper primary classrooms were not enough. New resources to support the reform curriculum were virtually non-existent. Assessment records indicated that old ways of using numerical scores were still being used.

Languages other than English were being used in the classroom. In the grade three classroom, English, *Tok Pisin* and a vernacular that the teacher spoke were used as the languages of instruction. However the children came from three elementary schools where three different vernacular languages were used. The grade three teacher knew only one of these three vernacular languages. So children from the other two vernacular languages were disadvantaged and were dependent on their knowledge of *Tok Pisin* and English to cope with the school work.

Overall there was some evidence in August 2006 that Ranara teachers were aware of the reform curriculum and were beginning to get involved in introducing the ideas into their practices. It was anticipated that the confidence and competence of teachers would continue to develop over time.

Innovation configuration checklist (Saidor)

Observations using the innovation configuration checklist were done in ten classrooms at Saidor Primary School during a visit in June 2008. The classes were for grades 3A, 3B, 4A, 4B, 5B, 6A, 7A, 7B, 8A and 8B. The data presented in Table 10 depict the configuration of the reform curriculum at Saidor Primary School. Variations to the left of the double line represent acceptable use and those to the right represent unacceptable use.

Table 10. Innovation configuration checklist percentile scores (Saidor)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses			100%	
2 Teachers guides			100%	
3 Curriculum support materials			100%	
4 Teaching methods	10%	10%	80%	
5 Programming		100%		
6 Assessment		100%		
7 Relevance		100%		
8 Attendance		30%	30%	40%
9 Community support			100%	
10 Leadership		100%%		
11Collaboration			100%	

Eleven components were rated in ten different classrooms making a total of 110 ratings. Of those, 45 (41%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other 65 (59%) ratings reflect weak or unacceptable implementation.

There were incomplete sets of syllabuses and teacher guides in both lower primary classrooms and upper primary classrooms. Some new resources to support the reform curriculum were evident but only in few of the classrooms. Attendance was a problem with a relatively high level of absenteeism. There was little observable evidence of community support or collaboration. *Tok Pisin* and English were being used in the classrooms. Some lessons were teacher directed while others were student centred. Intended outcomes of lessons were clearly stated, although some teachers had difficulty trying to program the language subject. Assessment records and programming documents indicated that new ways were being used. Subject content was relevant to students' lives.

Overall there was some observable evidence in June 2008 that Saidor teachers were applying principles of the reform curriculum in their classroom practices. It was expected that this would improve as teachers continued to engage with the new materials and participate in professional development activities relating to their use.

Innovation configuration checklist (Tauta)

Observations using the innovation configuration checklist were done in seven classrooms, one at each grade level. The number of teachers for each variation within a component was tallied and converted to a percentage of the sample group. These data are presented in Table 10. Variations to the left of the darker line represent acceptable use and those to the right represent unacceptable use.

Eleven components were rated in seven different classrooms making a total of 77 ratings. Of those, 41 (53%) were at acceptable levels for implementation of recommended strategies for reform curriculum implementation. The other 36 (47%) ratings reflect weak or unacceptable implementation.

Table 11: Innovation configuration checklist percentile scores (Tauta)

Component	Ideal	Good	Weak	Unsatis-factory
Rating	**1**	**2**	**3**	**4**
1 Syllabuses	28.6%	42.8%		28.6%
2 Teachers guides	28.6%	42.8%		28.6
3 Curriculum support materials	28.6%	14.3%	14.3%	42.8%
4 Teaching methods	14.3%	14.3%	71.4	
5 Programming	14.3%	57.1%		28.6
6 Assessment	14.3%	14.3%	42.8	28.6
7 Relevance	28.6%	28.6%	28.6%	14.2%
8 Attendance		14.3%	42.8	42.8
9 Community support			100%	
10 Leadership		100%		
11Collaboration		100%		

There were incomplete sets of syllabuses and teacher guides in the lower primary classrooms while in the upper primary classrooms there were complete sets of syllabuses and teachers' guides. The upper primary had only two classes, a grade seven class and a grade eight class. They had enough materials because there were only two teachers teaching within that level. There were some new resources to support the reform curriculum. *Tok Pisin* and English were both being used in the classrooms. Some lessons were teacher directed while others were student centred. Intended outcomes of some lessons were unclear and not explicitly stated while others were clearly stated. Assessment records and programming documents indicated that old ways were still being used.

Overall there was some observable evidence in May 2007 that Tauta teachers were applying principles of the reform curriculum in their classroom practices. It was expected that this would develop further as teachers continued to engage with the new materials and participate in professional development activities relating to their use.

Summary

I made observations in a total of 54 classrooms across the eight schools that covered classes from grade one to grade eight. The components of the checklist were based on the assumption that effectiveness would be achieved if individual teachers had full sets of syllabuses and teacher guides, there were supporting resources particularly for students, student-centred teaching methods were used, teaching programs reflected the outcomes in the

syllabuses, assessment was criterion based, topics were relevant to students' everyday lives, attendance was good, and that there was community support, good leadership within the school and collaboration amongst teachers.

Using a checklist, I awarded scores of what I considered to be acceptable and unacceptable application for each of the eleven components on the checklist. My assessment of the results in ranked order of observed levels of acceptable performance is represented in Table 12.

Table 12 Observed levels of acceptable performance

Checklist component	Cases /54	Percentage
1 OBE programming	38	70%
2 Relevant topics	36	67%
3 OBE assessment	31	57%
4 Seven syllabuses	28	52%
5 Student centred methods	25	46%
6 Leadership	24	44%
7 Collaboration	22	41%
8 Attendance	21	39%
9 Seven teacher guides	18	33%
10 Support materials	12	22%
11 Community support	2	4%

While there were distinct variations between classes and schools and times of collection, the intention here is to indicate trends in implementation across the eight schools. In general most teachers were able to access all seven subject syllabuses for the grades they taught, usually on a shared basis, and were using them to prepare their teaching programs. They were relating learning to topics that were meaningful to children's lives and were making the transition from assessment using tests and marks to assessment using criteria for judging the extent to which students were achieving curriculum outcomes. These were the four areas that scored acceptable levels of 50% or higher. Lower scores for other components are indicative of components where improvement is needed. The innovation configuration checklist has greatest value when interpreted at an individual classroom level.

The Curriculum Development and Assessment Division (2006) developed a curriculum ladder (refer Figure 1) that showed four stages of curriculum implementation: awareness, involvement, engagement and ownership. In collating results across the eight schools as shown in Table 13, it was found that most teachers were at the 'involvement' stage. This indicates that most teachers were just at the very early stages of getting involved by reading the materials, attending in-services, collaborating with others, planning outcome based lessons and delivering them.

Table 13: Implementation stage by grades across the case studies

Total score	**11**	**12-22**	**23-33**	**34-44**
Stage	**Ownership**	**Engagement**	**Involvement**	**Awareness**
Ambunti	None	None	Grade 3A & 3B, 4A, 5B, 6A, 6B, 7A	Grades 4B, 5A
Drekikier	None	None	All grades: 3A, 3B, 4A, 4B, 5A, 5B, 6A, 6B, 7A, 8A, 8B	None
Baklo	None	None	Grades 5&6, 7&8	None
Mersei	None	None	All grades observed 3, 4, 5, 6& 7	None
Bongu	None	None	Grades 3, 4, 5, 6, 7 & 8A	Grade 8B
Ranara	None	None	Grades 3, 4, 5, 6, 7 & 8	
Saidor	None	None	Grades 3A, 3B, 4A, 4B, 5B, 6A, 7A, 7B, 8A & 8B	None
Tauta	None	Grade 3	Grades 4, 5, 7 & 8	Grades 1 & 2

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